

# Substance Use, Mental Illness and Associated Consequences in Nebraska

*An Epidemiological Profile*

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December 2017



Nebraska Department of Health and Human Services  
Division of Behavioral Health  
Statewide Epidemiological Outcomes Workgroup

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Substance Use, Mental Illness and Associated Consequences in  
Nebraska



## *An Epidemiological Profile*

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## Section 1:

# Introduction to Nebraska's Statewide Substance Use Epidemiological Profile 2017



## Executive Summary

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In Nebraska, substance use continues to place an enormous strain on the health care system, the criminal justice system, and the substance use treatment system. In addition, mental illness and suicide affect a large number of Nebraskans and the systems that serve them. The following is a summary of the key findings for substance use and mental illness and their associated consequences in Nebraska.

### **Substance Use in Nebraska**

*Substance use is common in Nebraska, with alcohol being the most prevalently misused substance reported.*

- In 2015, more than 1 in every 5 Nebraska high school students (22.7 percent) reported drinking alcohol during the past month, about 1 in 8 smoked cigarettes (13.3 percent), nearly 1 in 4 used electronic vapor products (22.3 percent) and approximately 1 in 8 used marijuana (13.7 percent) in the same timeframe.
- In 2015, 1 of 5 Nebraska adults (19.5 percent) reported binge drinking in the past month.
- In addition, about one-sixth of adults over 18 (17.1 percent) smoked cigarettes and approximately 1 in every 15 used marijuana (6.4 percent) in the past month.

*Compared to the U.S., alcohol use in Nebraska is higher than average while smoking and most illicit drug use shows a similar rate, including opioid pain reliever misuse.*

- Binge drinking among Nebraska residents was higher than residents nationally. However, high school students reported similar binge drinking rates compared to their national counterparts.
- Cigarette smoking among Nebraska residents was very similar to residents nationally while illicit drug use tended to be slightly lower (although the differences were generally non-significant).
- Prescription pain reliever, including opioids, use without a doctor's prescription, is slightly lower than the U.S. average but the difference is not statistically significant.

*Substance use has, in general, decreased over the past 15 years except for illicit drug use.*

- Alcohol use (including binge drinking) and cigarette smoking among Nebraska high school students declined since the early 90's, and among adults in recent years.
- Since 2011, cigarette smoking appears to have declined among high school students and adults. Smokeless tobacco, however, has remained stable among both adults and youth.
- Marijuana use among Nebraska high school students and adults has remained fairly constant since 2011.
- Overall, lifetime non-marijuana illicit drug use among high school students has remained about the same from 2005 to 2015.

### **Consequences of Substance Use in Nebraska**

*Substance use contributes to medical care and death*

- In 2015, there were an estimated 703 alcohol-related deaths. In 2015, there were an estimated 2,500 smoking-related deaths, and 121 drug overdose deaths.
- In 2014, there were 2,403 alcohol-attributable hospitalizations and 1,549 drug-attributable hospitalizations.



### *Drug use has significant economic costs for employers*

- In 2015, it is estimated that substance use cost Nebraska employers over \$390 million in lost time, job training and re-training in addition to health care costs.

### *Alcohol-impaired driving rates are high compared to the nation and alcohol is commonly found in fatal motor vehicle crashes*

- In 2015, 10.1 percent of high school students in Nebraska reported driving after drinking in the past month.
- Nebraska adults were more likely than adults nationally to report past-month alcohol-impaired driving (2.5 percent and 1.7 percent) in 2014.
- One-third (32.6 percent) of all fatal motor vehicle crashes in 2015 involved alcohol, totaling 66 alcohol-involved fatal crashes.

### *Substance use places a strain on the criminal justice system*

- In 2015, there were 8,084 adult arrests for driving under the influence (DUI), 4,777 arrests for non-DUI alcohol-related crime and 10,186 arrests for possession or sales/manufacturing of illicit drugs in Nebraska.
- Of all adults sentenced to probation in 2016, 1 in 3 (34 percent) were sentenced for DUI, while about 1 in every 9 were sentenced for a drug-related offense (11.5 percent).
- Maintaining the 612 persons currently incarcerated for drug convictions in 2017 cost the state of Nebraska more than \$21 million annually.

### *Illicit drug use is the second most common reason for removal of children from the home*

- In 2016, nearly half (43.9 percent) of children removed from the home were taken at least in part due to parental substance use.

### *Alcohol is the primary drug of choice in substance use treatment admissions*

- In 2016, alcohol was listed as the primary drug of choice in more than 50 percent of substance use treatment admissions (56 percent) in the state, followed by methamphetamine (20 percent), marijuana (11 percent), and other opiates (e.g., morphine, heroin, etc.) (4 percent).

## **Mental Illness and Suicide in Nebraska**

### *Depression affects a significant number of Nebraska youth and adults*

- From 2014-2015, 1 in 14 Nebraska residents (7.2 percent) reported a major depressive episode in the past year.
- In 2015, 1 in 4 high school students (24.1 percent) reported they felt sad or hopeless every day for two weeks in a row.



### *Mental Illness is a concern for many Nebraska residents*

- Nearly 1 in 5 (18.2 percent) adults 18 and older reported having a mental illness in the last year, from 2014-2015.
- Nearly 1 in 24 adults, ages 18 and older (4.4 percent) reported having a serious mental illness in the last year from 2014-2015.

### *Suicide is a significant concern to public health problem in Nebraska*

- In 2015, there were 221 deaths due to suicide, making it the 11<sup>th</sup> highest cause of death in Nebraska.

## **Demographic Differences in Nebraska**

### *Differences by age*

- Residents in their late teens and early twenties were the most likely age group to drink alcohol as well as use tobacco and illicit drugs. In addition, they were also more likely than other age groups to drive after drinking and to be involved in an alcohol-related crash.
- Residents, 25-34 years old, were more likely to engage in binge drinking and be admitted into substance use treatment.
- Residents ages 45-54 had the highest age-specific death rate due to suicide.

### *Differences by gender*

- Among Nebraska high school students, males and females reported similar use patterns for alcohol use, cigarette smoking and illicit drug use.
- Among adults, men were more likely than women to binge drink, to drive after drinking and to use tobacco products, except for e-cigarettes.
- Males in Nebraska have a higher age-adjusted mortality rate from suicide than females do.

### *Differences by urban/rural*

- There was no significant difference between urban and rural areas in heavy alcohol use while those from the more rural Nebraska counties reported the highest percentage of smokeless tobacco use and a higher rate of suicide.
- Large urban counties had higher age-adjusted mortality rates for drug-related deaths than more rural counties.
- Large urban counties had lower age-adjusted mortality rates from suicide than more rural counties.
- Urban/rural differences for illicit drug use were largely unavailable.

### *Differences by race/ethnicity*

- Among Nebraska adults, Native Americans had the highest death rates for chronic liver disease and the highest rates for cigarette smoking.
- Among those persons receiving substance use treatment, 4.7 percent are Native Americans (non-Hispanic), while 1 percent of the total state population is Native Americans (non-Hispanic). Similarly 10 percent of those receiving substance use treatment are African American (non-Hispanic) while 5.3 percent of the total state population is African American (non-Hispanic).
- Racial and ethnic differences for illicit drug use were largely unavailable.

## *Introduction*

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Substance use, including the use of tobacco, illicit drugs and the misuse of alcohol, affects virtually every community across America. As a result, substance use places an enormous burden on the health care system, the criminal justice system, the substance use treatment system, and subsequently, the economy as a whole. In addition, substance use and misuse are one set of behavioral health problems that represent a continuing threat to public safety, disruption in families, and ongoing struggle for individuals.

The Substance Abuse and Mental Health Services Administration (SAMHSA) states that behavioral health problems include substance use disorders, alcohol and drug addiction, serious psychological distress, suicide and mental disorders. Problems can range from unhealthy stress or subclinical conditions to diagnosable and treatable diseases such as serious mental illness and substance use disorders. These illnesses and disorders are often chronic in nature but people can and do recover from them with the help of a variety of interventions, including medical and psychosocial treatments, self-help and mutual aid. The phrase “behavioral health” is also used to describe service systems that encompass prevention and promotion of emotional health, prevention of mental and substance use disorders, substance use, and related problems, treatments and services for mental and substance use disorders, and recovery support.

### *Purposes of the Report*

The primary purpose of this report is to present an epidemiological profile of the state of Nebraska that identifies the patterns of substance use and mental illness, the data that might help guide future data collection and analysis, and the gaps in the data available.

This report examines data on alcohol, tobacco and illicit drug use and their associated consequences in Nebraska. In addition, it focuses on mental illness indicators in Nebraska in relation to risk and protective factors for youth.

Working together as a broad group of stakeholders, this report is a product of the Statewide Epidemiological Outcomes Workgroup (SEOW) and is intended to inform state and community decision makers and serve as a resource for prevention planning and prioritization of programs, practices and policies. Utilization of this data while applying the five-step Strategic Prevention Framework process can assist with identifying strategies most effective in reducing substance use and mental illness, as well as promoting positive behavioral health changes.

## Overview and Background

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### *State Epidemiological Profile Report History*

**The mission of the Nebraska Statewide Epidemiology Outcomes Workgroup (SEOW) is to guide decision making and planning for prevention at the state and local levels by providing assessment and ongoing monitoring of epidemiological data in Nebraska.**

The SEOW was originally formed in March 2007 to make decisions regarding the collection and reporting of data related to substance use, including the consequences of and factors that contribute to substance use in the state of Nebraska. Led by the DHHS Division of Public Health, the initial tasks of the workgroup included creating an epidemiological profile report on substance use in Nebraska and establishing a set of criteria to facilitate the selection of substance use prevention priorities for the Strategic Prevention Framework State Incentive Grant. This information provided the foundation for the 2008 Nebraska substance use strategic plan. As a continuation of this work, in the fall of 2013, the DHHS Division of Behavioral Health (DBH) revised the statewide strategic plan for prevention.

In 2013, the Division of Behavioral Health was awarded the Strategic Prevention Framework Partnerships for Success. Guided by the Prevention Advisory Council and the SEOW, this five-year grant focuses on the prevention of underage alcohol use for youth aged 12-20 in 11 counties throughout the state.

With an emphasis on connecting shared risk and protective factors, the SEOW is now charged with characterizing behavioral health indicators to determine the scope and extent of mental illness, substance use and related problems in Nebraska.

In 2015, the SEOW reviewed the indicators used in the previous epidemiological reports and made further refinements. Several measures were eliminated and one new section, “Mental Illness and Suicide”, was added to the report. The 2017 report continues the 2015 format and offers additional mental illness indicators along with several updated data tables.

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### Updating the Report

*In 2015 the report was updated by identifying the original report sources and updating data when available. A similar approach was used in this update. Whenever possible, newer data was added to the data presented in the 2015 report to create longer trends. In some instances, the original data source was not available or had been revised. Therefore, in a few instances, data in the 2017 report may not be reported identically as it was reported in previously. This report will focus on updating data on substance abuse along with risk and protective factors. This report also adds information on mental health and suicide in Nebraska.*

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## Demographic Overview of Nebraska

Table 1.1: Demographics of Population by Gender, Age & Race/Ethnicity

		State of Nebraska		United States	
		N <sup>1</sup>	Percent <sup>2</sup>	N <sup>1</sup>	Percent <sup>2</sup>
Total		1,907,116	100.0%	323,127,513	100.0%
Gender					
	Female	956,445	50.2%	164,048,590	50.8%
	Male	950,671	49.8%	159,078,923	49.2%
Age					
	<10	265,640	13.9%	40,356,836	12.5%
	10-19	260,644	13.7%	41,748,232	12.9%
	20-34	392,705	20.6%	67,058,271	20.8%
	35-54	460,211	24.1%	83,256,835	25.8%
	55-64	241,172	12.6%	41,463,144	12.8%
	65-84	243,922	12.8%	42,863,864	13.3%
	85+	42,822	2.2%	6,380,331	2.0%
Race/Ethnicity <sup>^</sup>					
	White	1,715,806	90.0%	252,702,814	78.2%
	Black	108,122	5.7%	45,307,020	14.0%
	Asian	53,143	2.8%	20,487,524	6.3%
	N. American	30,045	1.6%	4,630,155	1.4%
	Hispanic	203,320	10.7%	57,470,287	17.8%
	Minority	372,153	19.5%	121,802,753	37.7%

2016 population estimates from the U.S. Census Bureau

<sup>1</sup>Number of residents by demographic

<sup>2</sup>Percentage of residents by demographic

<sup>^</sup>Race alone or in combination with other races. N American includes American Indian and Native Hawaiian and Other Pacific Islander, Hispanic can be of any race; Minority represents individuals who identified themselves as being of a non-White race, multi-racial, or Hispanic.

## Methodological Overview

To gain a comprehensive understanding of substance use and associated consequences in Nebraska, 19 data sources were chosen for this report. While other data sources contain information on substance use within Nebraska, the SEOW selected these 19 sources because they were readily available and met the purposes of the report. The following is a list of the data sources included in this report, along with a brief summary of some of the statistical methods used to develop it.

Indicator	Data Source
Alcohol-Related Motor Vehicle Crash Data	Nebraska Department of Roads
Alcohol Sales	National Institute for Alcohol Abuse and Alcoholism
Behavioral Risk Factor Surveillance System	Division of Public Health / DHHS
Centralized Data System	Division of Behavioral Health / DHHS
Cigarette Sales	Nebraska Department of Revenue
Drug Recognition Expert Data	Nebraska Office of Highway Safety
Fatality Analysis Reporting System	National Highway Traffic Safety Administration
Incarceration and Parole Data	Nebraska Department of Correctional Services
Mortality Data	Nebraska Vital Records / Division of Public Health / DHHS
National Survey on Drug Use and Health	SAMHSA
Nebraska Foster Care Review Office Annual Report	Nebraska Foster Care Review Office
Nebraska Hospital Discharge Data	Division of Public Health / DHHS
Nebraska Trauma Registry	Division of Public Health / DHHS
Nebraska Young Adult Alcohol Opinion Survey	Division of Behavioral Health / DHHS
Pregnancy Risk Assessment Monitoring System	Division of Public Health / DHHS
Probation Data	Nebraska Office of Probation Administration
Substance Use Disorder Costs for Employers Calculator	National Safety Council/NORC/Shatterproof
Uniform Crime Reporting	Nebraska Crime Commission
Youth Risk Behavior Survey	Division of Public Health / DHHS

***Some of the statistical methods used in this report:***

- Age-adjustment: This is a statistical method used to compare risk between populations while controlling for differences in age that may exist between populations. While age-adjusted rates and percentages are useful for comparing populations, the process modifies the rate/percentage within the population and subsequently should be viewed as a relative index rather than the actual rate/percentage within the population.
- Statistical significance testing: Unless noted, all statements within this report highlighting differences between groups reflect statistically significant differences where  $p < 0.05$ .
- Urban/Rural analysis: Because Nebraska is a sparsely populated state, with the majority of the population clustered along the eastern edge, it was divided into four urban and rural categories for this report. Categories were defined by county, but were based on the largest city size within each county. Regional differences beyond urban/rural were not included in this report.

Limitations exist for each of the data sources and statistical methods included within this report, as with any data source or statistical method. As a result, it is important to understand the limitations so that interpretation does not extend beyond them. For further detail on the methods used within this report see the Methodology section (page 149).

## Section 2:

# Alcohol Indicators in Nebraska: Consumption Patterns and Consequences





# *Alcohol – Summary of Key Findings*

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## ***Alcohol Use in Nebraska***

### *Alcohol use is common among youth and young adults*

- In 2015, just more than 1 out of 5 (22.7 percent) high school students, an estimated 23,000 individuals, reported alcohol usage in the last 30 days.
- In 2016, 2 of 3 young adults (67.2 percent) ages 19-25, an estimated 129,000 individuals, reported alcohol usage in the last 30 days.

### *Binge drinking has particularly high rates in Nebraska*

- Binge drinking among Nebraska residents (19.5 percent) was higher than residents nationally for adults ages 18 and over, based on self-reported surveys.
- In 2015, 1 out of every 7 high school students (14.3 percent), an estimated 14,000 individuals, reported binge drinking in the last month.

### *Alcohol use preceding and during pregnancy is high in Nebraska*

- In 2013, 3 in every 5 pregnant women (62.3 percent) reported drinking alcohol during the three months before pregnancy.
- In 2013, 5.2 percent of pregnant women continued to drink alcohol during the last three months of pregnancy, a rate that has increased slightly since 2000.

### *Alcohol is a commonly sold product and has continued to grow*

- Nebraska has seen an overall increase in the estimated sales of alcohol since 2000, from 22,300 gallons per 10,000 population to 22,900 in 2014 per 10,000 population for those age 14 and older.

## ***Consequences of Alcohol Use in Nebraska***

### *Alcohol use is a major contributor to death and medical care*

- Alcohol use killed an estimated 703 Nebraska residents in 2015 making it the sixth most common cause of death in Nebraska in 2015.
- In 2014, there were 2,403 hospitalizations in Nebraska which were primarily or secondarily attributable to alcohol.
- Of the 10,141 admissions to Nebraska trauma centers in 2015, 9.4 percent had blood alcohol content levels over the legal limit.

### *Alcohol use is commonly found as a factor in motor vehicle crashes*

- One-third (32.6 percent) of all fatal motor vehicle crashes in 2015 involved alcohol, with 66 alcohol-involved fatal crashes.
- In addition there were 778 alcohol-involved crashes in 2015 that resulted in an injury to one or more persons.

### *Alcohol impaired driving is particularly high in Nebraska*

- In 2014, adults in Nebraska were significantly more likely to have engaged in alcohol-impaired driving than their national counterparts, 2.5 percent and 1.7 percent, respectively.
- In 2015, 10.1 percent of high school students reported alcohol-impaired driving in the last 30 days.

### *Alcohol has significant economic costs for employers*

- In 2015, it is estimated that substance use (including alcohol) cost Nebraska employers more than \$390 million dollars in lost time, job training and re-training and health care costs.

### *Alcohol places a strain on the criminal justice system*

- In 2015, DUIs accounted for 13.4 percent of total arrests, accounting for the second leading arrest offense behind drug possession and sales.
- Of all the adults sentenced to probation in Nebraska during 2016, 34 percent were for DUI, making it the largest reason for probation.
- In 2015, there were an additional 4,777 adult arrests for non-DUI alcohol-related crimes in Nebraska (e.g., public intoxication, minor in possession, purchasing for a minor, selling to a minor).

### *Alcohol dependence or abuse affects many Nebraskans*

- In 2014 and 2015, 6.9 percent or approximately 97,000 Nebraskans, were estimated to be alcohol dependent or abusing alcohol.

### *Alcohol is the primary drug of choice in substance use treatment admissions*

- In 2016, alcohol was listed as the primary drug of choice in nearly 6 of every 10 substance use treatment admissions (56.2 percent).

## **Demographic Differences**

### *Differences by age*

- In general, younger adults had higher levels of alcohol use and consequences, but specific indicators had different age groups that were most likely affected (Table 2.1).

Table 2.1: Alcohol Indicators and Nebraska Residents

Indicator	Most Affected Age Group
Binge Alcohol Use	25-34
Heavy Alcohol Use	18-24
Alcohol-Associated Inpatient Hospitalization	45-64
Trauma Centers BAC > .08	25-35
Alcohol-Impaired Driving	19-25
Alcohol-related Crashes	25-34
Alcohol Dependence/Abuse	18-25
Treatment for Alcohol	25-34

### *Differences by gender*

- Men, overall, were more likely than women to binge drink, to drive after drinking, to die or be injured in an alcohol-related crash, to be arrested for DUI or other alcohol offenses, and to receive treatment for alcohol use.
- Male and female high school students reported a similar percentage for current alcohol use, binge drinking and driving after drinking.
- There is also no difference in gender for young adults 19-25 for current alcohol use and binge drinking.

### *Differences by urban/rural*

- There were no significant differences between urban and rural areas of Nebraska for binge and heavy alcohol use.

### *Differences by race/ethnicity*

- Native Americans had the highest mortality rate from chronic liver disease of any racial or ethnic group.

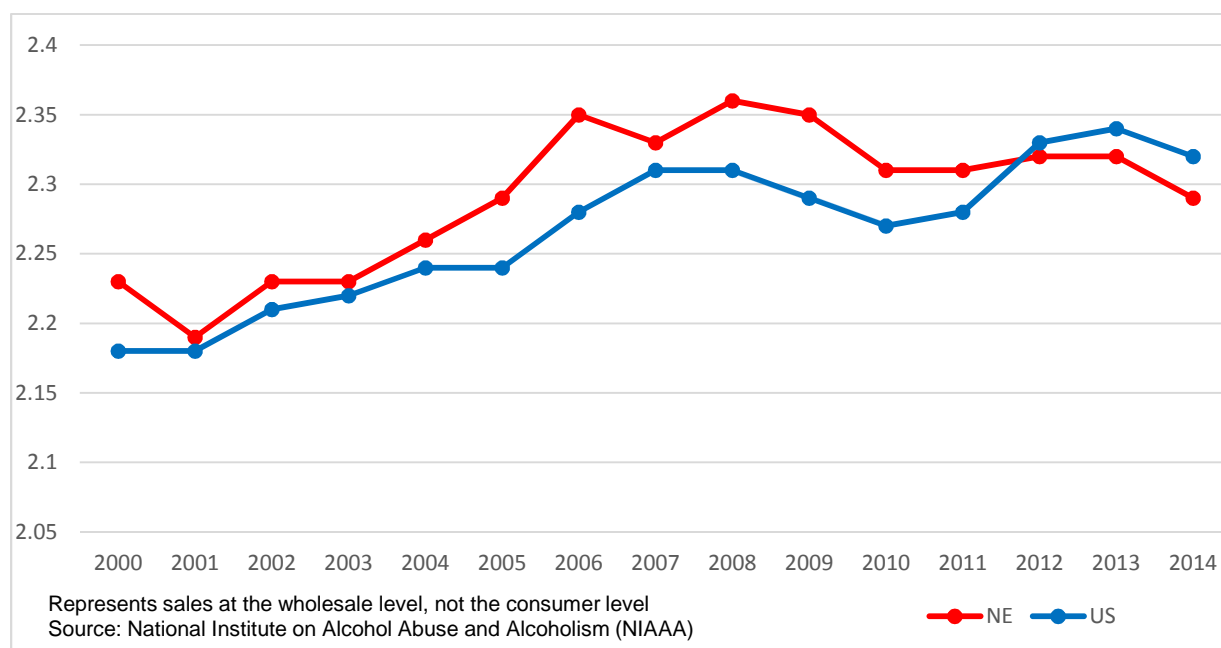
## General Consumption Patterns and Concerns

### Alcohol Sales

Alcohol is by far the most widely used substance in the state, according to both adult and youth surveys. Because there is a strong relationship between alcohol and negative outcomes (e.g., homicides, suicides, chronic diseases, and accident-related deaths and injuries) alcohol use in Nebraska remains an important issue for substance use prevention efforts occurring throughout the state.

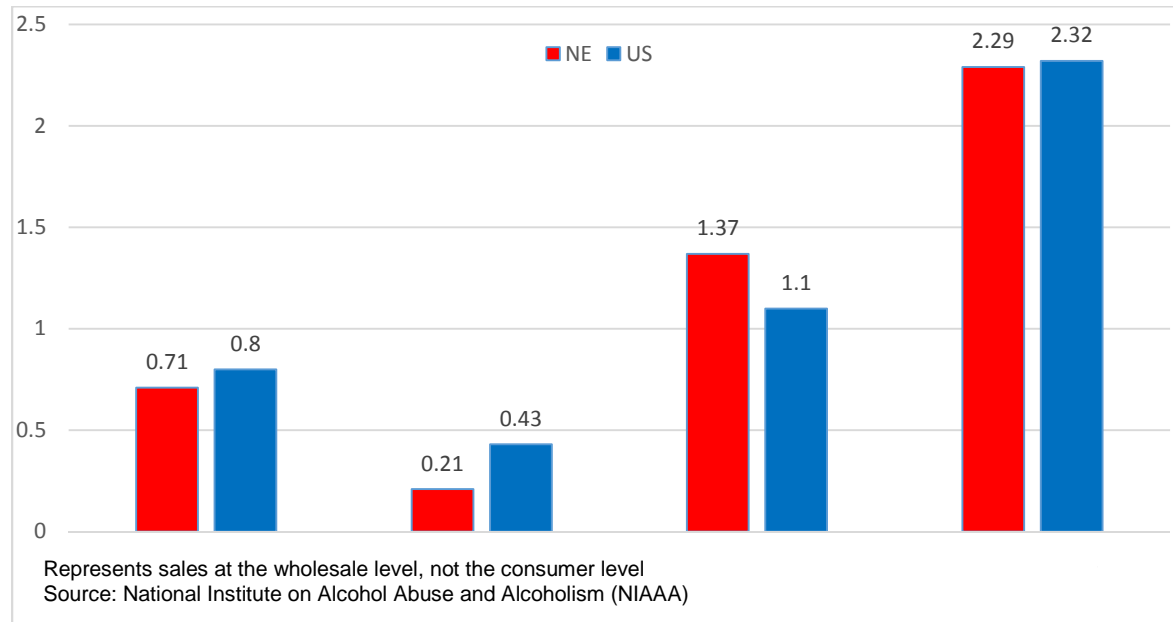
Alcohol sales data in Nebraska are collected at the wholesale level. Estimates are based on the number of gallons of alcohol sold, not necessarily the number of gallons consumed. Nebraska has seen an overall increase in the estimated sales of alcohol since 2000, from approximately 22,300 gallons per 10,000 population to 22,900 in 2014 (Figure 2.1).

Figure 2.1: Per Capita (Ethanol) Alcohol Sales (in thousands of gallons) among Residents 14 and older; Nebraska and U.S.; 2000-2014



Of all of the alcohol sold, the largest volume is beer, followed by spirits and then wine (Figure 2.2). The overall trend of sales has been fairly consistent for beer, while there has been a slight increase in spirit and wine sales.

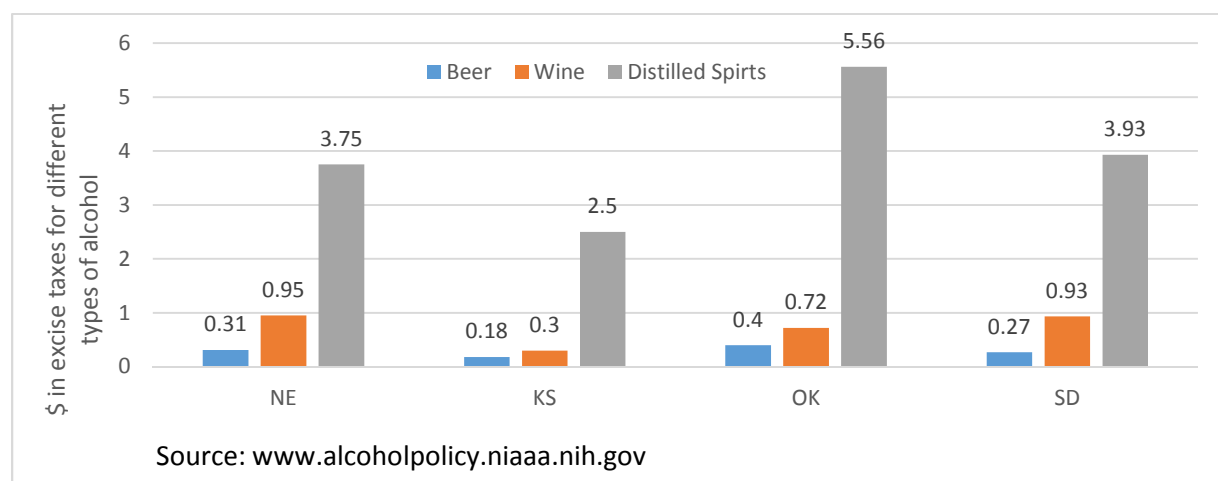
Figure 2.2: 2014 Per Capita (Ethanol) Alcohol Sales (in thousands of gallons) among Residents 14 and older; Nebraska and U.S.; by Beverage Type



### *Alcohol Taxation in Nebraska*

Nebraska has similar excise taxes on alcohol as neighboring states (see Figure 2.3). Beer had the lowest excise taxes, followed by wine. Distilled spirits had the highest taxes.

Figure 2.3 Excise Taxes on Alcohol for Nebraska, Kansas, Oklahoma & South Dakota, 2016



# Adult Alcohol Consumption

## Adult Alcohol Consumption: Binge Drinking

While there is not a mutually agreed upon definition for binge drinking, the term generally refers to the consumption of alcohol at levels resulting in impairment. The definition of binge drinking used for this report is: males consuming five drinks in a row and females consuming four drinks in a row in a single setting.

### Binge Drinking Indicator Summary

Indicator	Data Source	Year	Nebraska	Estimated Persons	Nation	Nebraska vs. Nation	Trend
Binge drinking among adults 18 and older	BRFSS	2015	19.5%	278,000	16.3%	Higher	Decreasing

### Current Levels of Binge Drinking in Nebraska

In 2015, about 1 in every 5 Nebraska adults (19.5 percent), an estimated 278,000 adults, reported binge drinking during the 30 days preceding the survey.

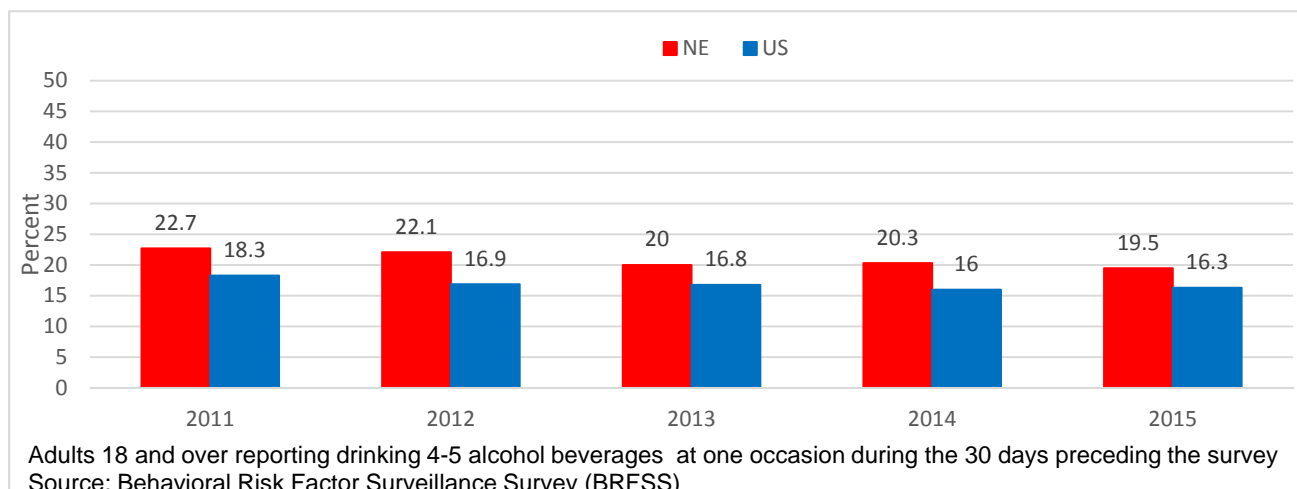
### Compared to the Nation

In 2015, adults in Nebraska were more likely than adults nationally to binge drink -- 19.5 percent and 16.3 percent, respectively.

### Trends

From 2011 to 2015, the percentage of Nebraska adults who reported recent binge drinking of alcohol dropped slightly from 22.7 percent in 2011 to 19.5 percent in 2015, but is significantly higher than the United States as a whole for each year it is reported (Figure 2.4).

Figure 2.4: Percentage of Adults Indicating Binge Drinking in Past 30 Days



## ***Adult Alcohol Consumption: Binge Drinking Demographics***

### ***Differences by Age***

One in three adults (33.5 percent), ages 25-34, were the most likely to report current (in the past 30 days) binge drinking. Starting at age 35, the percentage reporting binge drinking declines from 25.5 percent for 35-44 year olds to a low of 0.6 percent for those 85 and older.

### ***Differences by Gender***

There is a significant difference between males and females. Males are considerably more likely (27.4 percent) to report current binge drinking than females (14.7 percent) for the years 2011-2015 combined.

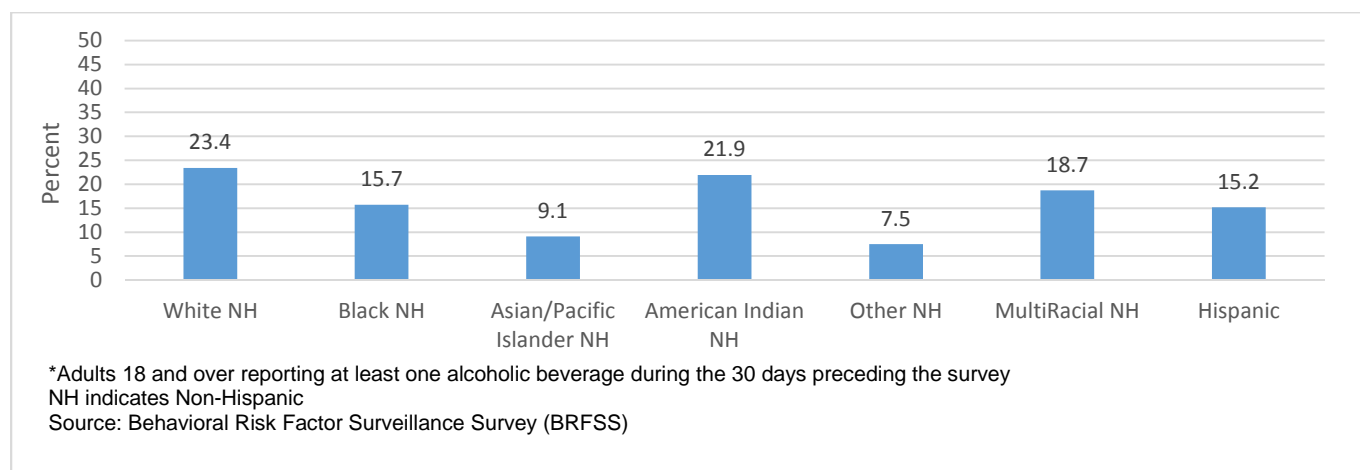
### ***Differences by Urban/Rural***

There is no statistically significant differences among Nebraskans based on their urban or rural location. Urban large areas (21.8), urban small (20.5) and rural areas (23.0) reported similar percentages of binge drinking during 2011-2015.

### ***Differences by Race/Ethnicity***

When looking at differences in current binge drinking from 2011 to 2015, beyond differences in age (age-adjustment used), persons identifying as white reported the highest percentage (23.4 percent), which was significantly higher than all other racial and ethnic groups except for American Indian and Multiracial. The two lowest percentages were Asian (9.1 percent) and Other (7.5 percent) for adults who currently binge drink. Figure 2.5 provides a breakdown of current binge drinking among Nebraska adults by race/ethnicity.

**Figure 2.5: Current Binge Drinking among Nebraska Adults by Race/Ethnicity**





## ***Adult Alcohol Consumption: Heavy Alcohol Use***

Heavy drinking refers to the self-reported consumption of more than 60 drinks for men (an average of more than two drinks per day) and 30 drinks for women (an average of more than one drink per day) during the past month or 30 days preceding the survey.

### ***Heavy Drinking Indicator Summary***

Indicator	Data Source	Year	Nebraska	Estimated Persons	Nation	Nebraska vs. Nation	Trend
Heavy drinking among adults 18 and older	BRFSS	2015	5.7%	81,000	5.9%	Non-Significant	Decreasing

### ***Current Levels of Heavy Drinking in Nebraska***

In 2015, nearly 1 in 17 Nebraska adults (5.7 percent), an estimated 81,000 adults, reported heavy drinking during the 30 days preceding the survey.

### ***Compared to the Nation***

In 2015, adults in Nebraska were similar to adults nationally to report heavy alcohol use -- 5.7 percent and 5.9 percent, respectively.

### ***Trends***

Nebraska has seen a slight decrease in the percent of adults who indicated heavy alcohol use from 7.5 percent in 2011 to 5.7 percent in 2015.

## ***Adult Alcohol Consumption: Heavy Alcohol Use by Demographics***

### ***Differences by Age***

Adults ages 18-24 were the most likely to report current heavy alcohol use with 1 in 10 (9.5 percent) reporting heavy drinking. Starting at age 35, the percentage reporting heavy alcohol use declines from 6.8 percent for 35-44 year olds to a low of 1.5 percent for those 85 years and older.

### ***Differences by Gender***

As with other alcohol use questions, there is a significant difference between males and females reporting heavy alcohol use. Males are significantly more likely (7.9 percent) to report current heavy alcohol use than females (5.6 percent) for the years 2011-2015 combined.

### ***Differences by Urban/Rural***

There is no significant difference between Nebraskans by urban and rural location.

### ***Differences by Race/Ethnicity***

When looking at differences in current heavy drinking from 2011 to 2015, there were no significant differences beyond differences in age (age-adjustment used).

### ***Adult Alcohol Consumption: Alcohol Use by Pregnant Women***

The Pregnancy Risk Assessment Monitoring System (PRAMS) collects data from pregnant women regarding health behaviors and attitudes before and during pregnancy. The current data comes from surveys completed between 2000 and 2013. PRAMS includes questions about alcohol use before and during pregnancy.

#### ***Alcohol and Pregnancy Indicator Summary***

Indicator	Data Source	Year	Nebraska	Trend
Alcohol use among pregnant women during the three months before pregnancy	PRAMS	2013	62.3%	Stable
Alcohol use among pregnant women during the last three months of pregnancy	PRAMS	2013	5.2%	Stable

#### ***Current Levels of Alcohol Use before Pregnancy***

PRAMS asked women following their delivery if they had used alcohol during the three months before their pregnancies. In 2013, nearly 2 in 3 Nebraska women who were pregnant (62.3 percent), reported using alcohol during the three months before pregnancy.

#### ***Trends***

As shown in Table 2.2, the percentage reporting alcohol use before pregnancy has increased steadily since 2000. In 2000, 56.5 percent reported using alcohol during the three months before pregnancy. By 2011, that percent had increased to 64.7 percent, but there was a slight decline in 2013 to 62.3 percent. These decreases were, however, not statistically significant.

**Table 2.2: Percentage of Women Indicating Alcohol Use during the Three Months before Pregnancy in Nebraska (2000-2013)**

2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
56.5%	57.3%	57.7%	58.3%	60.1%	61.3%	59.7%	62.6%	61.6%	63.6%	62.5%	64.7%	63.6%	62.3%

Source: Pregnancy Risk Assessment Monitoring System (PRAMS)

### ***Alcohol Use before Pregnancy by Race/Ethnicity***

There is a relationship between race and ethnicity and alcohol use before pregnancy. In 2012 and 2013 combined, white respondents reported the highest percentage (72.7 percent) while Asian/Pacific Islands (30.9 percent) and Hispanics (30.0 percent) reported the lowest use of alcohol use before pregnancy. Table 2.3 provides a breakdown of alcohol use before pregnancy by race/ethnicity.

**Table 2.3: Percentage of Women Indicating Alcohol Use during the Three Months before Pregnancy by Race/Ethnicity in Nebraska (2012-2013)**

Overall	Asian/Pacific Islander	Black	Native American	White	Hispanic^
62.9%	30.9%	45.6%	54.3%	72.7%	30.0%

Source: Pregnancy Risk Assessment Monitoring System (PRAMS)

^Hispanic can be of any race

### ***Levels of Alcohol Use during Pregnancy***

PRAMS asked women following their delivery if they had used alcohol during the last three months of their pregnancies. In 2013, 5.2 percent of Nebraska women who were pregnant reported using alcohol during the last three months of pregnancy.

### ***Trends***

As shown by Table 2.4, the percentage reporting alcohol use during pregnancy has increased with some variability since 2000. In 2000, 3.2 percent reported using alcohol during the last three months of pregnancy. By 2011, that percent has nearly doubled to 6 percent before dropping to 5.2 percent in 2013.

**Table 2.4: Percentage of Women Indicating Alcohol Use in Last Three Months of Pregnancy in Nebraska (2000-2013)**

2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
3.2%	3.5%	4.3%	4.6%	5%	5.2%	3.8%	6.2%	6.1%	4.4%	5.1%	6%	6.5%	5.2%

Source: Pregnancy Risk Assessment Monitoring System (PRAMS)

### ***Alcohol Use During Pregnancy by Race/Ethnicity***

Race and ethnicity do reveal some significant differences when looking at alcohol use during pregnancy. In 2012 and 2013 combined, white respondents reported significantly higher alcohol use (6.7 percent) than other groups. Table 2.5 provides a breakdown of alcohol use during pregnancy by race/ethnicity.

**Table 2.5: Percentage of Women Indicating Alcohol Use in Last Three Months of Pregnancy, by Race/Ethnicity in Nebraska (2012-2013)**

Overall	Asian/Pacific Islander	Black	Native American	White	Hispanic^
5.8%	3.1%	2.7%	4.2%	6.7%	4.0%

Source: Pregnancy Risk Assessment Monitoring System (PRAMS)

^Hispanic can be of any race

## Young Adult Alcohol Consumption and Perceptions in Nebraska

When looking at alcohol use data, it is consistently shown that young adults (ages 19 to 25) have the highest level of alcohol use and consequences, regardless of the fact that those persons who are 19 and 20 are not legally able to buy alcohol. In order to understand this age group better, Nebraska has sponsored the Nebraska Young Adult Alcohol Opinion Survey to collect data about alcohol use and consumption patterns among this age group. The survey has been conducted in 2010, 2012, and 2013, with the latest survey completed in 2016.

### *Young Adult Alcohol Consumption in Nebraska: Current Alcohol Use*

#### *Young Adult Current Alcohol Use Indicator Summary*

Indicator	Data Source	Year	Nebraska	Estimated Persons	Trend
Current alcohol use among adults 19-25	NYAAOS	2016	67.2%	129,000	Stable

#### *Current Alcohol Use in Nebraska among Young Adults*

In 2016, more than 2 in every 3 Nebraska young adults (67 percent), an estimated 129,000 persons, reported drinking alcohol during the 30 days preceding the survey.

#### *Trends*

From 2010 to 2016, the percent of Nebraska young adults who report recent consumption of alcohol has remained fairly stable with 67.9 percent of young adults reporting past month alcohol use in 2010 and 67.2 percent reporting it in 2016.

### *Young Adult Alcohol Consumption: Current Alcohol Use by Demographics*

#### *Differences by Age*

Young adults, 23-25 years of age, were the most likely to report current alcohol use (77.6 percent). Young adults ages 21-22, however, have a very similar percentage (76.1 percent). Young adults 19-20 years of age have a significantly lower percentage (43.9 percent), however, they are not legally able to buy alcohol.

There is no significant difference between males and females. Males (68.1 percent) and females (66.2 percent) have nearly identical percentages of current alcohol use.

## *Young Adult Alcohol Consumption in Nebraska: Binge Drinking*

### *Young Adult Binge Drinking Indicator Summary*

Indicator	Data Source	Year	Nebraska	Estimated Persons	Trend
Binge drinking among adults ages 19-25	NYAAOS	2016	37.4%	72,000	Decreasing
Binge drinking more than once in the past month among adults ages 19-25	NYAAOS	2016	25.6%	49,000	Decreasing

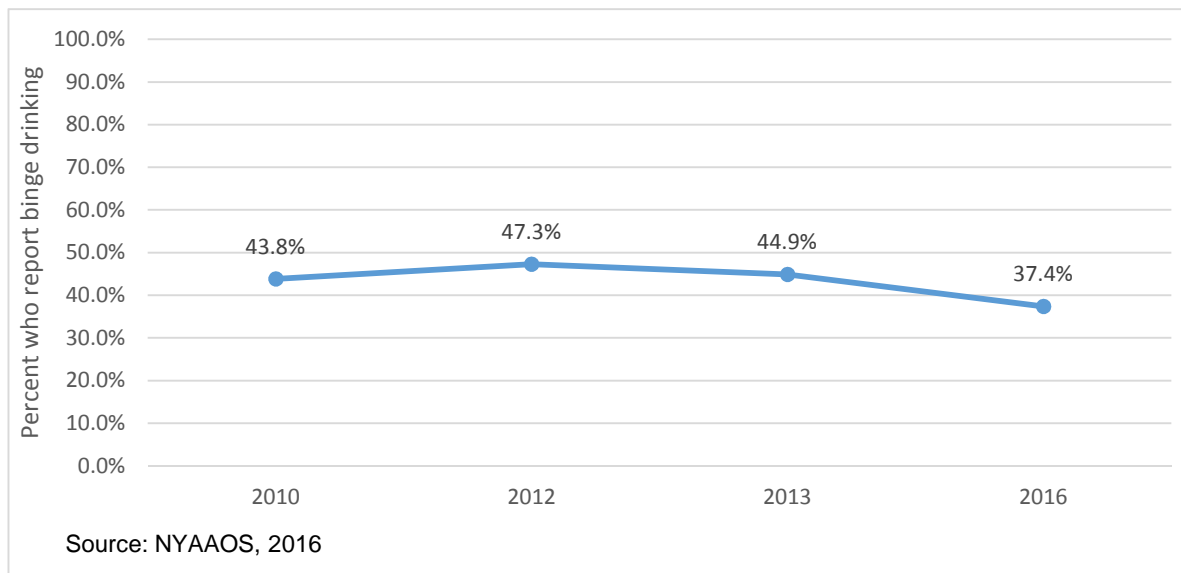
### *Binge Drinking in Nebraska among Young Adults*

- In 2016, 1 in 3 Nebraska young adults (37 percent), an estimated 72,000 persons, reported binge drinking during the 30 days preceding the survey.
- One in 4 (26 percent), an estimated 49,000 young adults, reported binge drinking more than once a month.

### *Trends*

- From 2010 to 2016, the percent of Nebraska young adults who reported binge drinking has decreased, with 43.8 percent of young adults reporting past month binge drinking in 2010 and 37.4 percent reporting it in 2016 (Figure 2.6).
- The percentage of those who binge-drank more than once a month has decreased, with 31.7 percent reporting binge drinking more than once in 2010 and 25.6 percent reporting this in 2016.

Figure 2.6: Binge Drinking among Young Adults (19-25) by Year



## ***Young Adult Alcohol Consumption: Binge Drinking by Demographics***

### *Differences by Age*

- Young adults 21-22 years old were the most likely to report current binge drinking (48.0 percent). Young adults, ages 23-25, reported a significantly lower rate (38.6 percent). Young adults 19-20 years of age had the lowest percentage (24.8 percent).
- Similar to overall binge drinking, young adults 21-22 years of age were the most likely to report binge drinking more than once in the past month (32.9 percent). Young adults ages 23-25, reported a significantly lower percentage (25.7 percent). Young adults 19-20 years of age had the lowest percentage (18.0 percent).

### *Differences by Gender*

- There is no significant difference between males (38.2 percent) and females (36.5 percent) in current binge drinking data.
- There is also no significant difference between males (27.3 percent) and females (23.8 percent) when looking at binge drinking more than once per month.

## ***Young Adult Perceptions about Alcohol***

The Nebraska Young Adult Alcohol Opinion Survey also asked questions about perceived risks of binge drinking and perceptions about whether it is wrong for individuals to drink alcohol or become intoxicated with alcohol.

### ***Young Adult Perceptions about Alcohol: Perceived Risks***

#### *Young Adult Perceived Great Risk of Binge Drinking Indicator Summary*

Indicator	Data Source	Year	Nebraska	Trend
Perceive great risk from binge drinking among adults 19-25	NYAAOS	2016	41.1%	Increasing

#### *Current Perceived Great Risk of Binge Drinking in Nebraska among Young Adults*

In 2016, 2 out of 5 Nebraska young adults (41 percent) reported perceiving great risk from binge drinking.

#### *Trends*

From 2010 to 2016, the percent of Nebraska young adults who report perceiving great risk from binge drinking has increased, with 32.1 percent of young adults reporting great risk from binge drinking in 2010 and 41.1 percent reporting it in 2016.

### ***Young Adult Perceptions about Alcohol: Perceived Risks by Demographics***

#### *Differences by Age*

There was no significant difference between 19-20 year olds (43.2. percent), 21-22 year olds (41.9 percent) and 23-25 year olds (39 percent) who reported perceiving great risk of binge drinking in 2016.

#### *Differences by Gender*

Females are significantly more likely (45.2 percent) to perceive great risk from binge drinking than males (37.2 percent) in 2016.



## ***Young Adult Perceptions about Alcohol: Social Norms about Underage Drinking***

### ***Young Adult Norms about Underage Drinking Indicator Summary***

Indicator	Data Source	Year	Nebraska	Trend
Wrong or very wrong for individuals under 18 years old to have one or two drinks among adults ages 19-25	NYAAOS	2016	83.6%	Stable
Wrong or very wrong for individuals 18-20 years old to have one or two drinks among adults ages 19-25	NYAAOS	2016	52.7%	Stable

### ***Young Adult Views about Underage Drinking In Nebraska***

- In 2016, 4 out of 5 Nebraska young adults (84 percent) stated that it was wrong or very wrong for individuals under 18 years of age to have one or two drinks of alcohol.
- A smaller percentage (53 percent) stated that it was wrong or very wrong for individuals 18-20 years of age to have one or two drinks of alcohol.

### ***Trends***

- From 2012 to 2016, (the question was not asked in 2010), the percentage of Nebraska young adults who stated that it is wrong or very wrong for individuals under 18 years of age to have one or two drinks of alcohol has remained fairly stable with 80 percent in 2012 and 83.6 percent in 2016.
- From 2010 to 2016, the percent of Nebraska young adults who stated that it is wrong or very wrong for individuals 18-20 years of age to have one or two drinks of alcohol has remained fairly stable with 51.8 percent of young adults stating it is wrong or very wrong in 2010 and 52.7 percent stating it in 2016.

## ***Young Adult Perceptions about Alcohol: Social Norms about Underage Drinking by Demographics***

### ***Differences by Age***

- Most young adults ages 21-22 (83.1 percent) and 23-25 (83.5 percent) reported it is wrong or very wrong for individuals under 18 years of age to have one or more drinks while those 19-20 years old (76.4 percent) are less likely to view this behavior as wrong or very wrong.
- A majority of young adults ages 21-22 (56.8 percent) and 23-25 (58 percent) report it is wrong or very wrong for individuals 18-20 years of age to have one or more drinks while those ages 19-20 (45.1 percent) are less likely to view this as wrong or very wrong.

### ***Differences by Gender***

- Females are significantly more likely (86.2 percent) to state it is wrong or very wrong for individuals under 18 to have one or more drinks of alcohol than males (81.2 percent).
- Females are also significantly more likely (56.8 percent) than males (48.8 percent) to view it as wrong for individuals 18-20 years old to have one or more drinks.

## ***Young Adult Perceptions about Alcohol: Social Norms about Binge Drinking***

### ***Young Adult Norms about Binge Drinking Indicator Summary***

Indicator	Data Source	Year	Nebraska	Trend
Wrong or very wrong for individuals under 18 years old to drink five or more drinks at one time among adults 19-25	NYAAOS	2016	93.9%	Stable
Wrong or very wrong for individuals 18-20 years old to drink five or more drinks at one time among adults ages 19-25	NYAAOS	2016	81.8%	Increasing
Wrong or very wrong for individuals 21 years old and older to drink five or more drinks at one time among adults 19-25	NYAAOS	2016	29.2%	Increasing

### ***Young Adult Views about Binge Drinking In Nebraska***

- In 2016, more than 9 out of 10 Nebraska young adults (94 percent) stated that it was wrong or very wrong for individuals under 18 years of age to have five or more drinks of alcohol at one time.
- A smaller percentage (82 percent) stated that it was wrong or very wrong for individuals 18-20 years of age to have five or more drinks of alcohol at one time.
- 29 percent stated it was wrong or very wrong for individuals 21 and older to have five or more drinks of alcohol at one time.

### ***Trends***

- From 2012 to 2016, (the questions were not asked in 2010), the percentage of Nebraska young adults who stated that it is wrong or very wrong for individuals under 18 years of age to have five or more drinks of alcohol at one time remained stable, with 95.5 percent stating it is wrong or very wrong in 2012 and 93.9 percent stating it in 2016.
- From 2012 to 2016, (the question wording was changed in 2012), the percent of Nebraska young adults who stated that it is wrong or very wrong for individuals 18-20 years of age to have five or more drinks of alcohol at one time increased, with 71.2 percent of young adults stating it is wrong or very wrong in 2012 and 81.8 percent stating it in 2016.
- From 2012 to 2016, (the wording of questions was changed in 2012), the percent of Nebraska young adults who stated that it is wrong or very wrong for individuals 21 years of age and older to have five or more drinks of alcohol at one time rose significantly, with 18.8 percent of young adults stating it is wrong or very wrong in 2012 and 29.2 percent stating it in 2016.

## ***Young Adult Perceptions about Alcohol: Social Norms about Binge Drinking by Demographics***

### ***Differences by Age***

- Young adults 21 and older are more likely to disapprove of underage binge drinking for individuals under 18 years of age. Most young adults ages 21-22 (94.6 percent) and 23-25 (94.5 percent) report it is wrong or very wrong for individuals under 18 years of age to have five or more drinks at one time while those 19-20 years old (89.7 percent) are less likely to view that as wrong or very wrong.

- Young adults 21 and older are also more likely to disapprove of underage binge drinking for individuals 18-20 years of age. Approximately four out of five young adults ages 21-22 (80.5 percent) and 23-25 (83.8 percent) report it is wrong or very wrong for individuals 18-20 years of age to have five or more drinks at one time while those 19-20 years old (70.7 percent) are less likely to view that as wrong or very wrong.
- There is no significant difference for disapproval of binge drinking for individuals 21 years and older by age group. Slightly more than 1 in 5 adults ages 19-20 (22.9 percent), 21-22 (22.7 percent) and 23-25 (20.5 percent) view it is wrong or very wrong for individuals 21 years and older to have five or more drinks at one time.

### *Differences by Gender*

- There is no significant difference between genders when looking at whether it is wrong or very wrong for individuals under 18 years of age to have five or more drinks of alcohol at one time. More than 9 out of 10 males (93.4 percent) and females (94.4 percent) view that as wrong or very wrong.
- Females are significantly more likely (84.6 percent) to state it is wrong or very wrong for individuals 18-20 to have five or more drinks of alcohol at one time than males (79.2 percent).
- There is no significant difference when looking at how wrong it is for individuals 21 years and older have five or more drinks of alcohol at one time by gender. Both males (29.2 percent) and females (29.1 percent) have similar perceptions of how wrong it is for those 21 years and older of age to have five or more drinks of alcohol at one time.

### *Alcohol Combined with other drugs among Young Adults*

In 2016, the Nebraska Young Adult Alcohol Opinion Survey asked respondents if they had taken certain substances while they were consuming alcohol in the past 12 months. The most common substance used with alcohol among young adults was marijuana, with one in ten (10.8 percent) who reported they used marijuana while drinking alcohol in the past 12 months. The second most common substance used (8.2 percent) was prescription medications (besides pain medication). One in twenty reported mixing alcohol with prescription pain medication (4.8 percent). Other substances were reported with much less frequency (Table 2.6).

**Table 2.6: Young Adults Use of Other Substances While Consuming Alcohol During the Past Year, 2016**

<b>Marijuana</b>	<b>Prescription Medications-Not Pain Medications</b>	<b>Prescription Pain Medications</b>	<b>Cocaine</b>	<b>Heroin</b>
<b>10.8%</b>	<b>8.2%</b>	<b>4.8%</b>	<b>1.7%</b>	<b>0.1%</b>

Source: Nebraska Young Adult Alcohol Opinion Survey (2016)

## Youth Alcohol Consumption

### ***Youth Alcohol Consumption: Lifetime Use***

Data concerning youth alcohol consumption are available through the Youth Risk Behavior Survey (YRBS). The YRBS is part of the National Youth Risk Behavioral Surveillance System that was established by the Centers for Disease Control and Prevention (CDC). The YRBS targets youth enrolled in grades 9-12 attending public schools in Nebraska.

#### *Lifetime Alcohol Use by Youth Indicator Summary*

Indicator	Data Source	Year	Nebraska	Estimated Persons	Nation	Nebraska vs. Nation	Trend
Youth lifetime alcohol use among grades 9-12	YRBS	2015	51.7%	52,000	63.2%	Lower	Decreasing

#### *Lifetime Alcohol Use in Nebraska among Youth*

In 2015, approximately half of Nebraska high school students (51.7 percent), an estimated 52,000 youth, reported drinking alcohol during their lifetime.

#### *Compared to the Nation*

In 2015, youth in Nebraska were less likely than youth nationally to ever use alcohol, 51.7 percent and 63.2 percent, respectively, an 11.5 percent difference.

#### *Trends*

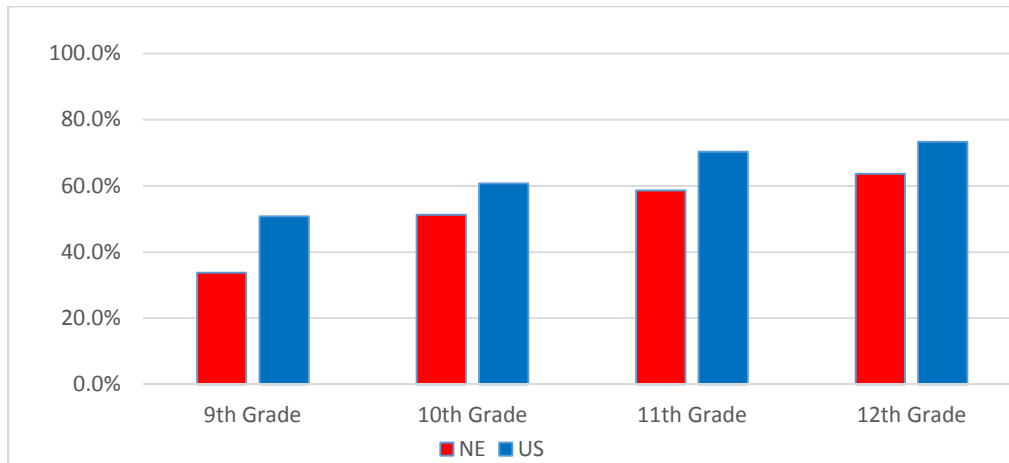
There has been a decline in the rate of lifetime use by high school students. In 2005, 3 out of every 4 (73.2 percent) reported drinking alcohol sometime in their life but in 2015, it dropped to 51.7 percent who reported drinking alcohol.

### ***Youth Alcohol Consumption: Lifetime Use by Demographics***

#### *Differences by Grade*

Lifetime alcohol use increases as youth move up into higher grades. In 9<sup>th</sup> grade, 1 in 3 (33.8 percent) reported alcohol use, but by 12<sup>th</sup> grade nearly 2 in 3 (63.7 percent) reported alcohol use. In each grade, the U.S. rate is higher than the Nebraska rate (Figure 2.7).

Figure 2.7: Percent High School Students Reporting Any Lifetime Alcohol Use by Grade 2015



#### *Differences by Gender*

Females are significantly more likely (56.5 percent) to report lifetime alcohol use than males (46.6 percent).

### ***Youth Alcohol Consumption: Past Month Use***

While alcohol use rates from a lifetime perspective illuminate experimentation with alcohol, 30-day use rates provide a better estimate of recent and/or current alcohol use.

#### ***Current Alcohol Use by Youth Indicator Summary***

Indicator	Data Source	Year	Nebraska	Estimated Persons	Nation	Nebraska vs. Nation	Trend
Youth current alcohol use among grades 9-12	YRBS	2015	22.7%	23,000	32.8%	Lower	Decreasing

#### ***Current Alcohol Use in Nebraska among Youth***

In 2015, approximately 1 in 5 of Nebraska high school students (22.7 percent), an estimated 23,000 youth, reported drinking alcohol during the 30 days preceding the survey.

#### ***Compared to the Nation***

In 2015, youth in Nebraska were less likely than youth nationally to currently use alcohol, 22.7 percent and 32.8 percent, respectively.

#### ***Trends***

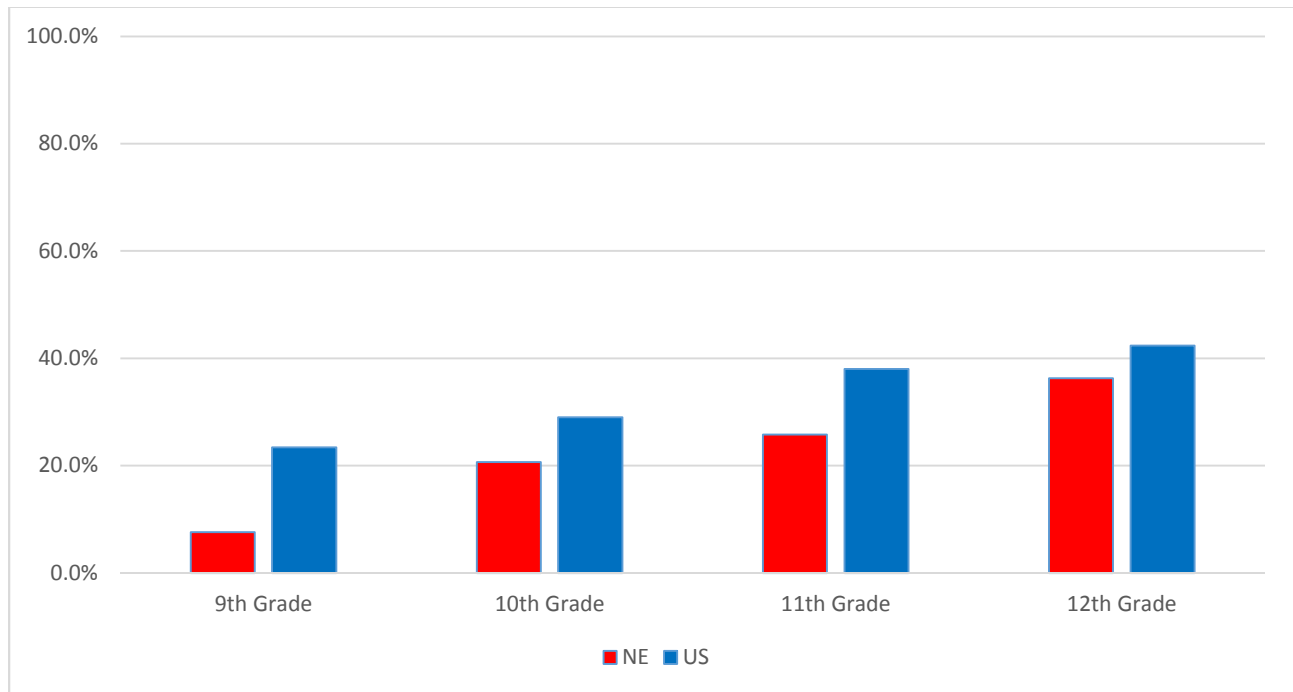
There has been a significant decline in the rate of past month use by high school students. In 2005, nearly half (42.9 percent) reported drinking alcohol in the past 30 days but in 2015, only 22.7 percent reported doing so.

### ***Youth Alcohol Consumption: Past Month Use by Demographics***

#### ***Differences by Grade***

Past month alcohol use increases as youth move up into higher grades. In 9<sup>th</sup> grade, 1 in 13 (7.6 percent) reported alcohol use but by 12<sup>th</sup> grade, the percent who reported alcohol use in the past month had increased substantially (36.3 percent) (Figure 2.6).

Figure 2.8 Percent High School Students Reporting Past 30-Day Alcohol Use by Grade 2015



*Differences by Gender*

Past month alcohol use does not differ significantly by gender. One in 5 (20.5 percent) of males report past-month alcohol use, while 24.9 percent of females report past month alcohol use.



### ***Youth Alcohol Consumption: Binge Drinking***

Binge drinking, which is indicated by the consumption of five or more drinks of alcohol in a row on one or more of the 30 days preceding the YRBS survey, is associated with injuries, motor vehicle crashes, violence, fetal alcohol spectrum disorder and a number of other chronic and acute conditions.

#### ***Binge Alcohol Use by Youth Indicator Summary***

Indicator	Data Source	Year	Nebraska	Estimated Persons	Nation	Nebraska vs. Nation	Trend
Youth binge alcohol use among grades 9-12	YRBS	2015	14.3%	14,000	17.7%	Non-Significant	Decreasing

#### ***Binge Alcohol Use in Nebraska among Youth***

In 2015, approximately 1 in 7 of Nebraska high school students (14.3. percent), an estimated 14,000 youth, reported binge drinking the 30 days preceding the survey.

#### ***Compared to the Nation***

In 2015, youth in Nebraska were less likely than youth nationally to binge drink but the difference, 14.3 percent (Nebraska) and 17.7 percent (nationwide) was not statistically significant.

#### ***Trends***

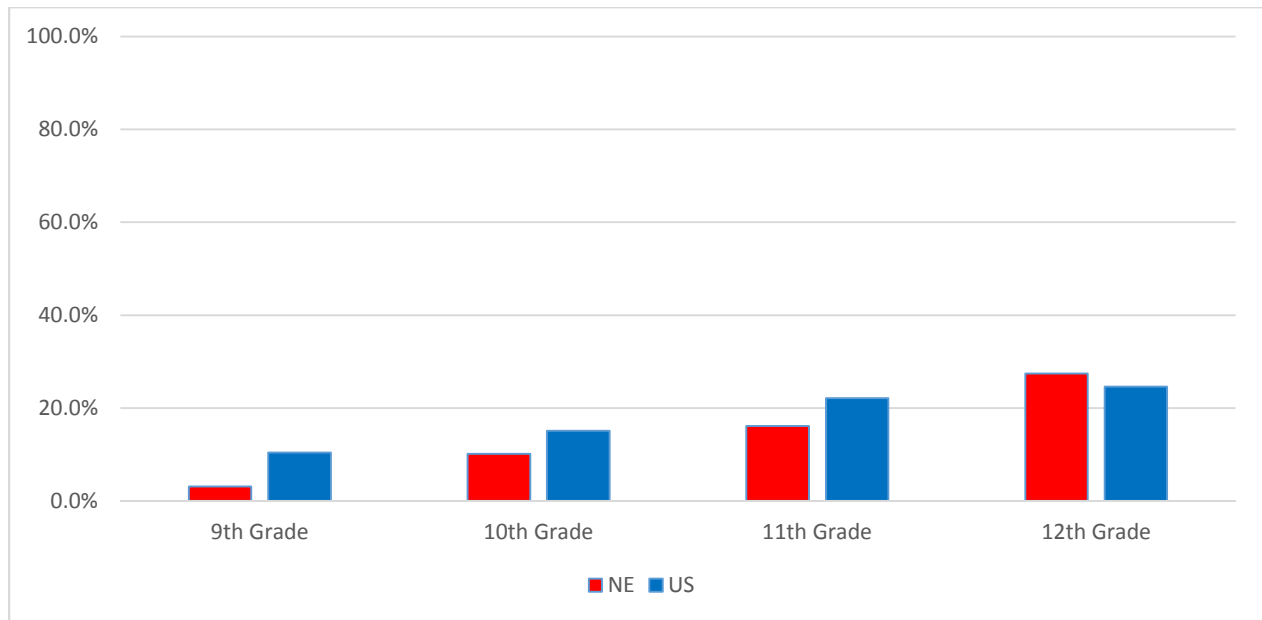
There has been a significant decline in the percent of high school students who binge drink. In 2005, nearly 1 in 3 (29.8 percent) reported binge drinking alcohol in the past 30 days, but in 2015, only 14.3 percent reported doing so.

### ***Youth Alcohol Consumption: Binge Drinking by Demographics***

#### ***Differences by Grade***

Similar to other alcohol use, past month binge drinking increases as youth move up into higher grades. In 9<sup>th</sup> grade, 1 in 32 (3.1 percent) reported past month binge drinking, but by 12<sup>th</sup> grade, 1 in 4 (27.4 percent) reported binge drinking in the past month (Figure 2.9).

Figure 2.9: Percent of High School Students Reporting Past 30-Day Binge Drinking by Grade, 2015.



#### *Differences by Gender*

Past-month binge drinking does not differ by gender. One in 7 (14.4 percent) of males reported past-month binge drinking while 14.4 percent of females report past-month binge drinking.

### ***Youth Alcohol Consumption: Heavy Drinking***

Heavy drinking, which is indicated by the consumption of ten or more drinks of alcohol in a row on one or more of the 30 days preceding the survey is a new question starting in 2013 to determine heavy alcohol use in addition to binge drinking.

#### ***Heavy Alcohol Use by Youth Indicator Summary***

Indicator	Data Source	Year	Nebraska	Estimated Persons	Nation	Nebraska vs. Nation	Trend
Youth heavy alcohol use among grades 9-12	YRBS	2015	3.3%	3,000	4.3%	Non-significant	Stable

#### ***Heavy Alcohol Use in Nebraska among Youth***

In 2015, approximately 1 in 30 Nebraska high school students (3.3 percent), an estimated 3,000 youth, reported heavy drinking during the 30 days preceding the survey.

#### ***Compared to the Nation***

In 2015, youth in Nebraska were similar to youth nationally regarding the percent who drink alcohol heavily, 3.3 percent and 4.3 percent, respectively.

#### ***Trends***

The percent of high school students who report heavy alcohol drinking has remained stable since 2013. In 2013, 3.8 percent reported heavy alcohol use in the past 30 days and in 2015, 3.3 percent reported heavy alcohol use in the past 30 days.

### ***Youth Alcohol Consumption: Heavy Drinking by Demographics***

#### ***Differences by Grade***

Similar to other alcohol use, past month heavy drinking increases as youth move up into higher grades although the difference is smaller. In 9<sup>th</sup> grade, a small percentage (1.2 percent) reported past month heavy drinking but by 12<sup>th</sup> grade, that rate had increased slightly (5.8 percent).

#### ***Differences by Gender***

Similar to binge drinking, there is no significant difference between males and females. Nearly 1 in 20 of males (4.1 percent) reported that they have consumed ten or more drinks in a row in the past month while a similar percent of females (2.6 percent) also reported heavy alcohol use in the past month.

### ***Youth Alcohol Consumption: Early Initial Alcohol Use among Youth***

Recent research has found an association between the age at which a person first uses alcohol and alcohol problems later in life. One proposed strategy to prevent alcohol dependence or use in adulthood is to delay the onset of alcohol use. According to a report by the National Institute on Alcohol Abuse and Alcoholism, persons reporting first use of alcohol before age 15 were four times more likely to meet the criteria for alcohol dependence at some point in their lives<sup>1</sup>. The YRBS asked students if they have drank alcohol before the age of 13.

#### ***Early Initial Alcohol Use by Youth Indicator Summary***

Indicator	Data Source	Year	Nebraska	Estimated Persons	Nation	Nebraska vs. Nation	Trend
Youth early initial alcohol use (before 13 years old) among grades 9-12	YRBS	2015	13.7%	14,000	17.2%	Lower	Decreasing

#### ***Early Initial Alcohol Use in Nebraska among Youth***

In 2015, approximately 1 in 8 Nebraska high school students (13.7 percent), an estimated 14,000 youth, reported they had their first drink of alcohol before they were 13 years old.

#### ***Compared to the Nation***

In 2015, youth in Nebraska were slightly less likely than youth nationally to have drank alcohol before age 13, 13.7 percent and 17.2 percent, respectively.

#### ***Trends***

There has been a significant decrease in the percent of high school students who drank alcohol before age 13. In 2005, 1 in 4 (23.9 percent) indicated they had consumed alcohol before age 13 but that has dropped to 13.7 percent in 2015.

### ***Youth Alcohol Consumption: Early Initial Alcohol Use among Youth by Demographics***

#### ***Differences by Grade***

Early initial alcohol use does not differ significantly by grade.

#### ***Differences by Gender***

Early initial alcohol use does not differ significantly by gender. Males (14.9 percent) are about as likely as females (11.8 percent) to report using alcohol before age 13.

## Consequences of Alcohol Consumption: Introduction

Death due to alcohol consumption has multiple dimensions. Alcohol-related deaths can result from chronic use (e.g., alcoholic cirrhosis of the liver) as well as acute use (e.g., alcohol involvement in a motor vehicle crash). In addition, alcohol-related deaths are either classified as directly (100 percent) attributable to alcohol use (e.g., alcohol poisoning) or partially attributable to alcohol use (those in which alcohol is often a contributing factor; e.g., homicide). For conditions in which alcohol is not the direct cause of death, but rather a contributing factor, alcohol-attributable fractions (AAFs) can be applied to death certificate data to generate estimates of the number of alcohol-related deaths. Estimates of the number of alcohol-related deaths presented in this report were calculated using the Centers for Disease Control and Prevention (CDC) Alcohol-Related Disease Impact (ARDI) software. Table 2.7 shows alcohol related causes of death and injury and the percentage that can be attributed to alcohol.

**Table 2.7: Causes of Death or Injury or Diseases that are Attributable to Alcohol**

Cause/Disease	Percentage Directly Attributable to Alcohol
<b>Chronic Causes</b>	
Acute pancreatitis	24%
Alcohol abuse	100%
Alcohol cardiomyopathy	100%
Alcohol dependence syndrome	100%
Alcohol polyneuropathy	100%
Alcohol-induced chronic pancreatitis	100%
Alcoholic gastritis	100%
Alcoholic liver disease	100%
Alcoholic myopathy	100%
Alcoholic psychosis	100%
Breast cancer (females only)	6%
Cholelithiasis	2.5%
Chronic hepatitis	10%
Chronic pancreatitis	64%
Degeneration of nervous system due to alcohol	100%
Epilepsy	15%

Esophageal cancer	25%
Esophageal varices	40%
Fetal alcohol syndrome	100%
Fetus and newborn affected by maternal use of alcohol	100%
Gastro esophageal hemorrhage	47%
Hypertension	3%
Ischemic heart disease	00.1%
Laryngeal cancer	29%
Liver cancer	21%
Liver cirrhosis, unspecified	40%
Low birth weight, prematurity, intrauterine growth retardation or death	6%
Oropharyngeal cancer	21%
Portal hypertension	40%
Prostate cancer	5%
Psoriasis	11%
Spontaneous abortion (females only)	4%
Supraventricular cardiac dysrhythmia	17%
Stroke hemorrhagic	20%
Stroke ischemic	3%
<b>Acute Causes</b>	
Air-space transport	18%
Alcohol poisoning	100%
Aspiration	18%
Child maltreatment	16%
Drowning	34%
Excessive blood alcohol level	100%
Fall injuries	32%
Fire injuries	42%
Firearm injuries	18%

Homicide	47%
Hypothermia	42%
Motor-vehicle non-traffic crashes	18%
Motor-vehicle traffic crashes	33%
Occupational and machine injuries	18%
Other road vehicle crashes	18%
Poisoning (not alcohol)	29%
Suicide	23%
Suicide by and exposure to alcohol	100%
Water transport	18%

Source: Centers for Disease Control and Prevention. Alcohol Related Disease Impact (ARDI) application, 2017. Available at [https://nccd.cdc.gov/DPH\\_ARDI/default/default.aspx](https://nccd.cdc.gov/DPH_ARDI/default/default.aspx)

## Alcohol-Related Mortality and Morbidity: Alcoholism Fatalities

There are a number of deaths each year attributable to alcohol use. There were an average of 655 deaths each year from 2011 to 2015 from alcohol-related causes estimated through the ARDI estimates of alcohol mortality. Chronic causes contributed slightly more (56 percent) deaths than acute causes (44 percent).

In 2015, with an estimated 703 deaths due to alcohol-attributable causes, it becomes the 6<sup>th</sup> most common cause of death in Nebraska, following heart disease (3,587); cancer, (3,511); chronic lung disease (1,097); accidents (795), and cerebrovascular disease (776).

### Alcohol-Related Death Indicator Summary

Indicator	Data Source	Year	Number of Deaths Nebraska*
Alcohol-related death estimate	Vital Records	2015	703

Centers for Disease Control and Prevention. Alcohol Related Disease Impact (ARDI) application and codes, 2017. Available at [https://nccd.cdc.gov/DPH\\_ARDI/default/default.aspx](https://nccd.cdc.gov/DPH_ARDI/default/default.aspx).

## Alcohol-Related Mortality and Morbidity: Alcoholism Fatalities by Demographics

### Differences by Gender

From 2011 to 2015, males have nearly twice the number of deaths due to alcohol. Males have more than twice the number of deaths due to acute causes and slightly less than twice the number of deaths for chronic causes. (Table 2.8).

Table 2.8: Alcohol-Related Death\* by Gender and Type

Cause	Male Deaths	Female Deaths	Overall Deaths
Chronic causes	1,143	708	1,851
Acute causes	960	467	1,427
<b>Total for all alcohol-attributable causes</b>	<b>2,103</b>	<b>1,175</b>	<b>3,277</b>

Deaths attributable to Alcohol from 2011 to 2015

Note: There may be some differences by column because of rounding

Centers for Disease Control and Prevention. Alcohol Related Disease Impact (ARDI) application and codes, 2017. Available at [https://nccd.cdc.gov/DPH\\_ARDI/default/default.aspx](https://nccd.cdc.gov/DPH_ARDI/default/default.aspx).



## Differences by Age

From 2011 to 2015, those age 65 or older have the highest number of deaths followed by those 50-64 years of age. For those age 50 or older, a majority of the deaths came from chronic alcohol use while for those ages 0-34, almost all of the deaths come from acute alcohol causes.

While the number of deaths is higher for those 65 and older, the percent of deaths is higher from alcohol-attributable causes for those younger than 50. For those under 20, 8.1 percent of all deaths came from alcohol-attributable causes compared to 2.3 percent of those 65 and older. The percentage of deaths related to alcohol is highest for those ages 20 to 34 at 22.4 percent (Table 2.9).

**Table 2.9: Alcohol-Related Death\* by Age and Type**

Cause	0-19	20-34	35-49	50-64	65+	Overall Deaths
Chronic causes	6	35	212	635	964	1,852
Acute causes	102	323	269	292	441	1,427
<b>Total for all alcohol-attributable causes</b>	<b>108</b>	<b>357</b>	<b>482</b>	<b>926</b>	<b>1,404</b>	<b>3,277</b>
Total for all causes of death	1,322	1,592	3,305	11,635	61,712	79,566

Deaths attributable to Alcohol from 2011 to 2015

Note: There may be some differences by column because of rounding

Centers for Disease Control and Prevention. Alcohol Related Disease Impact (ARDI) application and codes, 2017. Available at [https://nccd.cdc.gov/DPH\\_ARDI/default/default.aspx](https://nccd.cdc.gov/DPH_ARDI/default/default.aspx).

## *Alcohol-Related Mortality and Morbidity: Chronic Liver Disease*

**Table 2.10: Chronic Liver Disease Mortality**

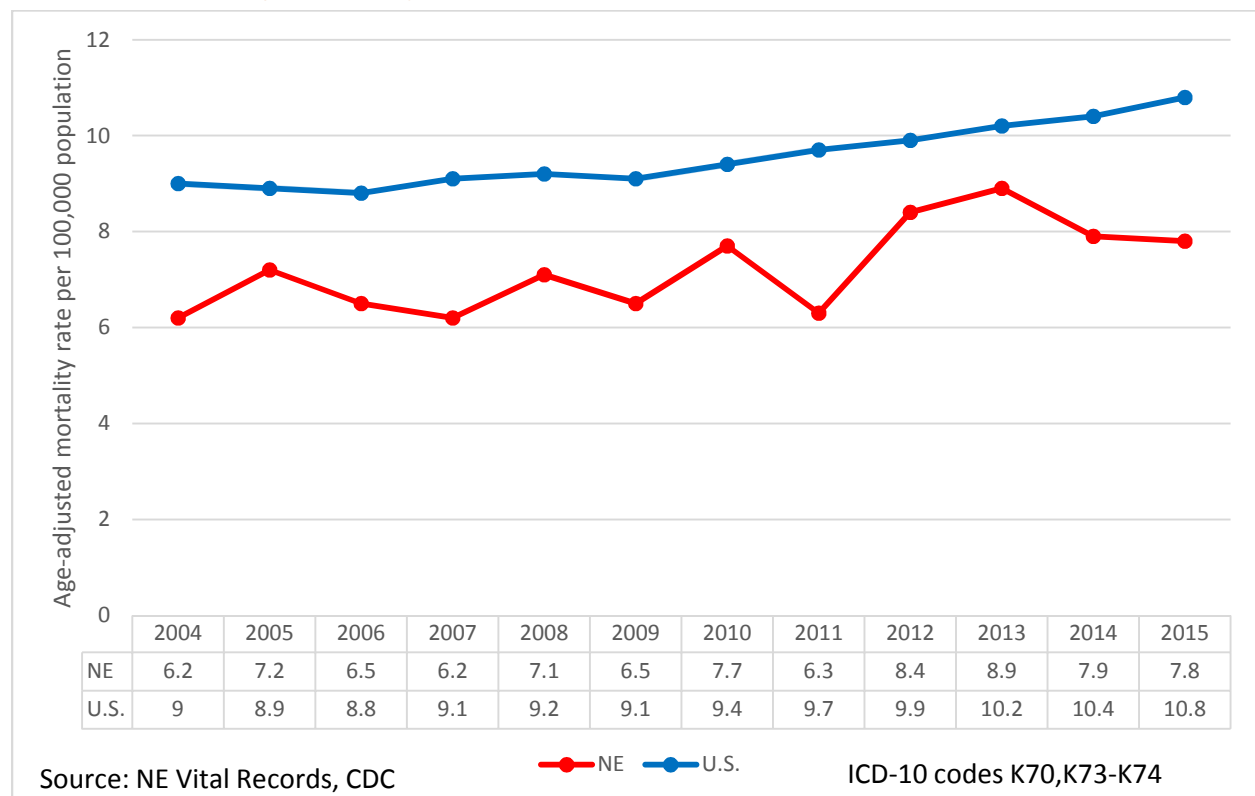
Indicator	Data Source	Year	Nebraska AA Rate*	Number of Deaths	National AA Rate*	Nebraska vs. Nation	Trend
Chronic liver disease	Vital Records**	2015	7.8	165	10.8	Lower	Increasing (04-15)

\* Age-adjusted death rate per 100,000 population

\*\*Nebraska data were obtained from Nebraska vital records. U.S. data were obtained from CDC Wonder (online)

Chronic liver disease and cirrhosis is often related to alcohol consumption. While Nebraska consistently has an age-adjusted mortality rate lower than the national average, Nebraska's rate has seen a slow but steady increase since 2004. (Figure 2.10).

Figure 2.10: Chronic Liver Disease and Cirrhosis Age-Adjusted Mortality Rate, Nebraska vs. U.S. (2004-2015).



In 2015, chronic liver disease killed 165 Nebraska residents (Table 2.11). While not all chronic liver disease deaths result from alcohol use, alcohol use is the most common cause of liver disease.

Table 2.11: Chronic Liver Disease and Cirrhosis

Year	Nebraska AA Rate^	Number of Deaths	National AA Rate^	Nebraska vs. Nation
2008	7.1	134	9.2	Lower
2009	6.5	136	9.1	Lower
2010	7.7	157	9.4	Lower
2011	6.3	129	9.7	Lower
2012	8.4	175	9.9	Lower
2013	8.9	181	10.2	Lower
2014	7.9	165	10.4	Lower
2015	7.8	165	10.8	Lower

^Age-adjusted death rate per 100,000 population

## ***Alcohol-Related Mortality and Morbidity: Chronic Liver Disease Mortality by Demographics***

### *Differences by Gender*

Males have double the age-adjusted mortality rate (10.6) of females (5.3) in 2015.

### *Differences by Age*

There are few deaths for chronic liver disease for those under age 45 but the rate increases considerably for those ages 45 and older.

### *Differences by Urban/Rural*

There was no difference between urban large, urban small or rural counties for 2011-2015 combined.

### *Differences by Race/Ethnicity*

Native Americans have a significantly higher mortality rate (45.3 percent) for chronic liver disease than Whites (7.6 percent) for 2011-2015 combined.

## Alcohol-Related Mortality and Morbidity: Alcohol-Attributable Hospitalizations

The Nebraska hospital discharge database and the Nebraska trauma registry database are two data sources in Nebraska that contain information on hospital care. For this report, Nebraska hospital discharge data were limited to information on inpatient care received at acute care hospitals in Nebraska, while trauma registry data were limited to inpatient care received through seven trauma centers within Nebraska that were reporting data into the Nebraska Trauma Registry (NTR) at the time of the report.

### *Alcohol-Related Mortality and Morbidity: Inpatient Alcohol-Attributable Hospitalizations*

#### **Data Source: Nebraska Hospital Discharge Data**

In 2014, there were 2,403 inpatient hospitalizations in Nebraska, in which an alcohol-attributable condition was listed as either the primary or a secondary reason for the hospitalization (Table 2.12). In addition to the 2,403 hospitalizations in which alcohol was a direct contributor, it is likely that alcohol use indirectly contributed to a much larger number of hospitalizations. For example, alcohol use can contribute to hospitalizations indirectly through altering judgment that may lead to injury or through chronic conditions (such as high blood pressure).

**Table 2.12: Alcohol-Attributable Hospitalizations in Nebraska by Age and Gender, 2014**

	Number	Percent
<b>Total</b>	2,403	
<b>Gender</b>		
Male	1,683	70.0%
Female	720	30.0%
<b>Age</b>		
1-17	36	1.5%
18-44	1,054	43.9%
45-64	1,167	48.6%
65-84	144	6.0%
85+	2	0.1%

Includes hospitalizations in which an alcohol-attributable code was listed as either the primary cause of or a secondary cause to the hospitalization

Source: Nebraska Hospital Discharge Data

## ***Inpatient Illicit-Drug Hospitalizations by Demographics***

### ***Differences by Age***

In 2014, the most common age group for inpatient alcohol-related hospitalizations was 45-64 year olds closely followed by those 18-44 years old.

### ***Differences by Gender***

In 2014, the majority of inpatient alcohol-related hospitalizations were from males (70 percent) while females accounted for nearly one-third (30 percent).

### ***Differences by Urban/Rural***

In 2015, the majority of hospitalizations came from urban large counties (1,704). The smallest number, 280, came from rural counties while urban small counties had 419 hospitalizations.

## ***Alcohol-Related Mortality and Morbidity: Trauma Center Hospitalizations***

**Data Source: Nebraska Trauma Registry**

In contrast to hospital discharge data, patients receiving care at Nebraska trauma centers are tested (at the discretion of each trauma center) for alcohol and drugs in their system at the time of admission. As a result, information is available on the patient's blood alcohol concentration (BAC) at the time of admission. Again, the following results are limited to inpatient hospitalizations through seven trauma centers currently reporting data into the NTR.

### ***Alcohol Involvement in Trauma Center Hospitalizations***

In 2015, there were 10,141 inpatient trauma center hospitalizations among Nebraska residents, of which 1,060 (10.5 percent) were among patients who had alcohol in their system at the time of admission. When separating hospitalizations by BAC, 112 hospitalizations (1.1 percent) had a BAC  $<0.08$  while 948 (9.4 percent) had a BAC  $>0.08$  (the level defined as legally intoxicated for Nebraska adults 21 and older). It is possible that there was a larger number of hospitalizations among patients with a BAC  $<0.08$  (in particular) who may not have been tested as a result of failing to show visible signs of impairment.

When comparing hospitalization demographically, males were more likely than females to have alcohol in their system at the time of admission (14.3 percent and 6.2 percent, respectively) while patients 18-24 (17.6 percent), 25-34 (20.5 percent), and 35-44 (19.3 percent) were the most likely age-groups to have legally intoxicating blood alcohol levels in their system. (Table 2.13).

Table 2.13: Trauma Center Hospitalizations in which Alcohol was in Patients System at the Time of Admission<sup>^</sup>, 2015

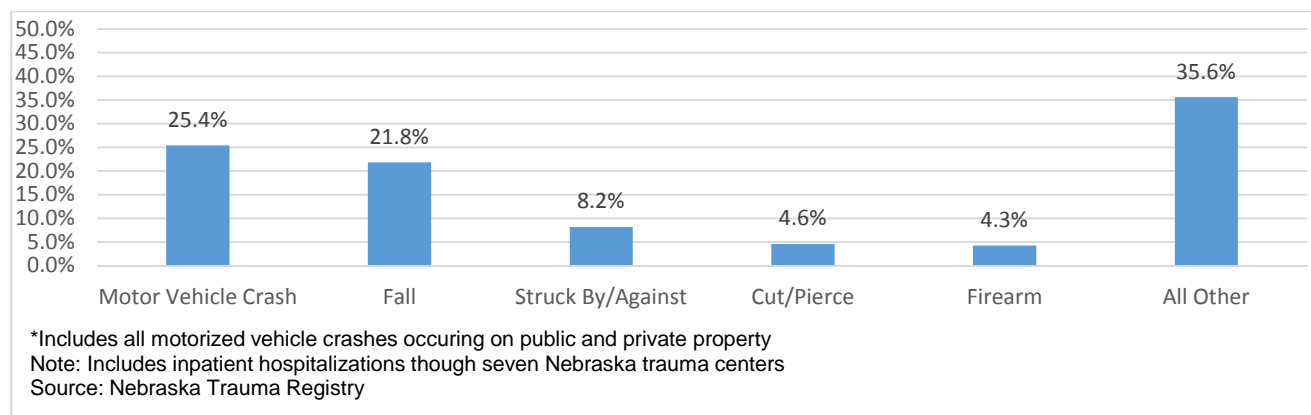
Demographic	Total # of Hospitalizations	Number and percent of hospitalizations with BAC < .08		Number and percent of hospitalizations with BAC > or = .08		Number and percent of hospitalizations with any alcohol involvement	
		Number	Percent	Number	Percent	Number	Percent
<b>Total</b>	10,141	112	1.10%	948	9.35%	1,060	10.45%
<b>Gender</b>							
Male	5,727	162	2.83%	723	12.62%	816	14.25%
Female	4,393	66	1.50%	197	4.48%	271	6.17%
<b>Age</b>							
<18	1,500	9	0.60%	12	0.80%	21	1.40%
18-24	1,004	51	5.08%	177	17.63%	228	22.71%
25-35	1,022	37	3.62%	209	20.45%	246	24.07%
35-44	826	27	3.27%	159	19.25%	186	22.52%
45-64	2,179	76	3.49%	330	15.14%	406	18.63%
65+	3,608	28	0.78%	62	1.72%	90	2.49%

<sup>^</sup>Includes inpatient hospitalizations through seven Nebraska Trauma Centers

Source: Nebraska Trauma Registry

Among hospitalizations in which the patient had alcohol in their system at the time of admission, motor vehicle crashes accounted for 25.4 percent, followed by falls (21.8 percent), and struck by or against some object (8.2 percent) (Figure 2.11).

Figure 2.11: Among Trauma Center Hospitalizations in which the Patient had Alcohol in their System at the Time of Admission, Percentage by Type of Injury, 2015



## Alcohol-Impaired Driving

Alcohol consumption impairs an individual's ability to drive a motor vehicle in a safe manner. Alcohol-related crashes result in a large number of deaths, injuries and property damage each year in Nebraska. This section of the epidemiological profile focuses on data related to drinking and driving and alcohol related motor vehicle crashes.

### *Alcohol-Impaired Driving: Reported Alcohol Impaired Driving*

#### *Adult Alcohol-Impaired Driving Indicator Summary*

Indicator	Data Source	Year	Nebraska	Estimated Persons	Nation%	Nebraska vs. Nation	Trend
Alcohol-impaired driving among adults	BRFSS	2014	2.5%	35,000	1.7%	Higher	Decreasing

#### *Alcohol-Impaired Driving in Nebraska*

In 2014, 2.5 percent of adults, an estimated 35,000 adults, reported drinking alcohol and driving during the 30 days preceding the survey.

#### *Compared to the Nation*

In 2014, adults in Nebraska were more likely than adults nationally to drink alcohol and drive, 2.5 percent and 1.7 percent, respectively.

#### *Trends*

There has been a decrease from 3.4 percent in 2012 to 2.5 percent in 2014.

### *Alcohol-Impaired Driving: Reported Alcohol Impaired Driving by Demographics*

#### *Differences by Age*

Those ages 18-44 are significantly more likely to report drinking and driving than other age groups.

#### *Differences by Gender*

Males are more likely than females to drink and drive with a rate four times than that of females

#### *Differences by Urban/Rural*

There was no significant difference between alcohol-impaired driving between urban and rural counties.

### *Differences by Race/Ethnicity*

White residents are significantly more likely (3.4 percent) to report drinking and driving than Black residents (1.5 percent), American Indian residents (1.1 percent) or Hispanics (1.7 percent).

**Table 2.14: Reported Drinking and Driving in Nebraska in Adults (18+)**

<b>Gender</b>	
<b>Male</b>	4.8%
<b>Female</b>	1.2%
<b>Age</b>	
<b>18-44</b>	4.0%
<b>45-64</b>	2.9%
<b>65 and older</b>	0.8%
<b>Urban/Rural</b>	
<b>Urban Large</b>	2.9%
<b>Urban Small</b>	3.0%
<b>Rural</b>	3.6%
<b>Race/Ethnicity</b>	
<b>White NH</b>	3.4%
<b>Black NH</b>	1.5%
<b>Asian NH</b>	2.3%
<b>American Indian NH</b>	1.1%
<b>Other NH</b>	2.6%
<b>Multi-Racial NH</b>	2.9%
<b>Hispanic</b>	1.7%

Source: Behavioral Risk Factor Surveillance Survey for years 2012 and 2014 combined



## ***Alcohol-Impaired Driving: Reported Alcohol Impaired Driving by Young Adults***

When looking at young adults using the Nebraska Young Adult Alcohol Opinion Survey, it is clear that a large percentage report alcohol impaired driving

### ***Young Adult Alcohol-Impaired Driving Indicator Summary***

Indicator	Data Source	Year	Nebraska	Estimated Persons	Trend
Past year alcohol impaired driving among adults 19-25	NYAAOS	2016	17.2%	33,000	Decreasing
Past month driving after binge drinking among adults 19-25	NYAAOS	2016	4.3%	8,000	Decreasing

### ***Young Alcohol-Impaired Driving in Nebraska***

In 2016, 17.2 percent of young adults aged 19 to 25, an estimated 33,000 young adults, reported drinking alcohol and driving during in the past year. In addition, 4.3 percent, an estimated 8,000 young adults, reported binge drinking and driving in the past month before taking this survey.

### ***Trends***

The percentage of young adults who drank alcohol and drove has declined since 2010. In 2010, 30.3 percent reported drinking alcohol and driving in the past year but by 2016, the percent decreased to 17.2 percent. Similarly, the percent who reported binge drinking and driving has declined. In 2010, 8.4 percent reported binge drinking and driving during the past month but by 2016, the percentage had decreased to 4.3 percent.

## ***Alcohol-Impaired Driving: Reported Alcohol Impaired Driving by Young Adults by Demographics***

### ***Differences by Age***

In 2016, young adults ages 19-20 report significantly lower (10.9 percent) alcohol impaired driving in the past year compared to 21-22 year olds (20.0 percent) and 23-25 year olds (19.6 percent). Young adults ages 19-20 (2.6 percent) reported significantly less driving in past month after binge drinking than those 23-25 (5.2 percent).

### ***Differences by Gender***

In 2016, males (19.1 percent) were significantly more likely than females (15.1 percent) to report alcohol impaired driving in the past year. There is no significant difference between males (4.9 percent) and females (3.6 percent) that report past-month driving after binge drinking.

## ***Alcohol-Impaired Driving: Reported Alcohol Impaired Driving or Riding with Alcohol-Impaired Driver by Youth***

Similar to the BRFSS for adults, the YRBS tracks drinking and driving among high school students along with the percent who rode with a driver who had been drinking.

### ***Youth Alcohol-Impaired Driving Indicator Summary***

<b>Indicator</b>	<b>Data Source</b>	<b>Year</b>	<b>Nebraska</b>	<b>Estimated Persons</b>	<b>Nation</b>	<b>Nebraska vs Nation</b>	<b>Trend</b>
Past 30 day drove after drinking alcohol among high school students	YRBS	2015	10.1%	10,000	7.8%	Non-Significant	Stable
Past month rode with driver who had been drinking alcohol	YRBS	2015	22.3%	23,000	20.0%	Non-significant	Decreasing

### ***Youth Alcohol-Impaired Driving in Nebraska***

In 2016, 1 in 10 (10.1 percent) high school students, (an estimated 10,000 youths), reported drinking alcohol and driving in the 30 days preceding this survey. In addition, 1 in 5 (22.3 percent) high school students, (an estimated 23,000 youths), reported riding with a driver who had been drinking alcohol in the past 30 days.

### ***Compared to the Nation***

- In 2015, youth in Nebraska were about as likely as youth nationally to drink and drive, 10.1 percent and 7.8 percent, respectively.
- Nebraska youth were not significantly different compared to youth nationally to ride with a driver who had been drinking 22.3 percent and 20.0 percent respectively.

### ***Trends***

- There has been no statistically significant difference in the percent of high school students who report drinking and driving the past 30 days. In 2013, 6.8 percent reported drinking and driving in the past 30 days, while in 2015 10.1 percent reported binge drinking alcohol in the past 30 days.
- The percent of high school youth who have ridden with a driver who had been drinking alcohol did decline. In 2005, 35.6 percent reported riding with a driver who had been drinking in the past 30 days, but in 2013, only 22.3 percent reported that.

## ***Alcohol-Impaired Driving: Reported Alcohol Impaired Driving or Riding with Alcohol-Impaired Driver by Youth by Demographics***

### ***Differences by Grade***

Young students are less likely to drink and drive. Ninth graders (2.1 percent) are significantly less likely than twelfth graders (18.0 percent) to report drinking and driving. There is no significant difference for youth riding with a driver who has been drinking alcohol.

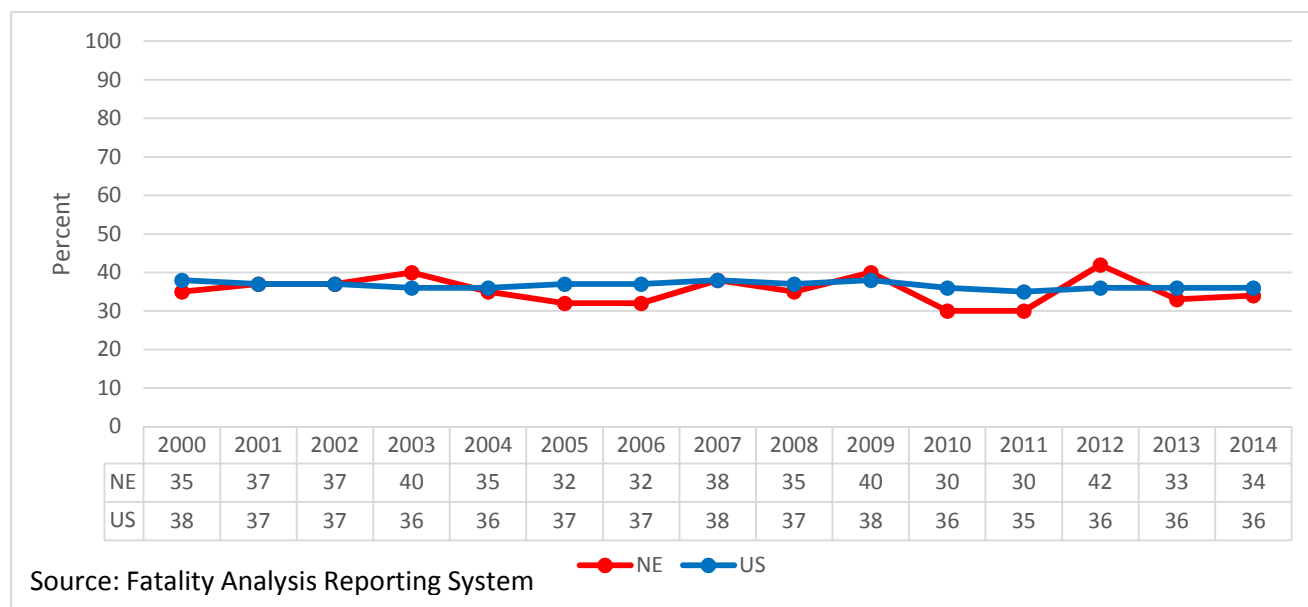
### ***Differences by Gender***

Past month drinking and driving does not differ by gender. Males (11.2 percent) are as likely as females (9.1 percent) to report drinking and driving. There is also no significant difference between males (21.4 percent) and females (23.2 percent) in youth riding with a driver who has been drinking

## ***Alcohol-Related Motor Vehicle Crash Fatalities and Injuries: Fatal Vehicle Crashes Involving Alcohol***

The National Highway Traffic Safety Administration (NHTSA) collects national and state estimates of alcohol-related crashes and fatalities through the Fatality Analysis Reporting System (FARS). Fatal vehicle crashes involving alcohol account for approximately 36 percent of U.S. traffic fatalities across the nation. Figure 2.12 displays the percent of fatal vehicle crashes involving alcohol for both Nebraska and the U.S. Nebraska has a slightly lower but very similar percent of fatal vehicle crashes involving alcohol, although in 2009 and 2012 the percentage was higher than the U.S. average.

**Figure 2.12 Fatal Vehicle Crashes Involving Alcohol, Nebraska vs U.S. (2000-2014)**



## ***Alcohol-Related Motor Vehicle Crash Fatalities and Injuries: Fatalities and Injuries by Demographics***

### ***Differences by Age***

Table 2.15 shows the number and percentage of alcohol-involved injury and fatal crashes by age group of driver for 2015. The two age groups with the highest risk are individuals 20-24 years old and those 25-34 years old. Together these groups account for over half of alcohol-involved injury crashes (22.8 percent for 20-24 year olds and 31.1 percent for 25-34 year olds). They also comprise half of all fatal crash victims in 2014 (24.2 percent for 20-24 year olds and 27.3 percent for 25-34 year olds).

Table 2.15: Number & Percentage of Alcohol Involved Injury and Fatal Vehicle Crashes by Age Group of Driver, Nebraska, 2015.

	Under 16	16-19	20-24	25-34	35-44	45-54	55-74	75 and older	Age not known
<b>Injury crashes</b>	1	65	177	242	116	105	67	2	3
<b>Alcohol injury crashes percent</b>	0.1%	8.4%	22.8%	31.1%	14.9%	13.5%	8.6%	0.3%	0.4%
<b>Fatal crashes</b>	0	4	16	18	13	10	3	2	0
<b>Alcohol fatal crashes percent</b>	0.0%	6.1%	24.2%	27.3%	20.0%	15.2%	4.5%	3.0%	0.0%

### *Differences by Gender*

Table 2.16 provides a gender comparison for alcohol-related crashes by gender of the driver. Males were twice as likely as females to be involved in alcohol-related crashes for both injury and fatal crashes.

Table 2.16: Gender of Driver in Alcohol-Related Injury & Fatal Crashes, Nebraska 2014

	Injury Crashes		Fatal Crashes	
	Number	Percent	Number	Percent
<b>Male</b>	733	63.2%	55	67.9%
<b>Female</b>	427	36.8%	26	32.1%
<b>Total</b>	1,160	100.0%	81	100.0%

## ***Alcohol-Related Motor Vehicle Crash Fatalities and Injuries: Alcohol Involvement and Crash Severity***

Source: Nebraska Department of Highway Safety

As alcohol involvement increases, so does the crash severity. Data from 2015 illustrates that Property Damage Only Crashes, Injury Crashes, and Fatal Crashes involved alcohol about 4.1 percent, 6.8 percent and 32.6 percent of the time, respectively (Figures 2.13-2.15). It must be noted that currently only fatal crashes require alcohol testing, so the other categories may be understated.

Figure 2.13: Injury Non-Fatal Crashes, 2015

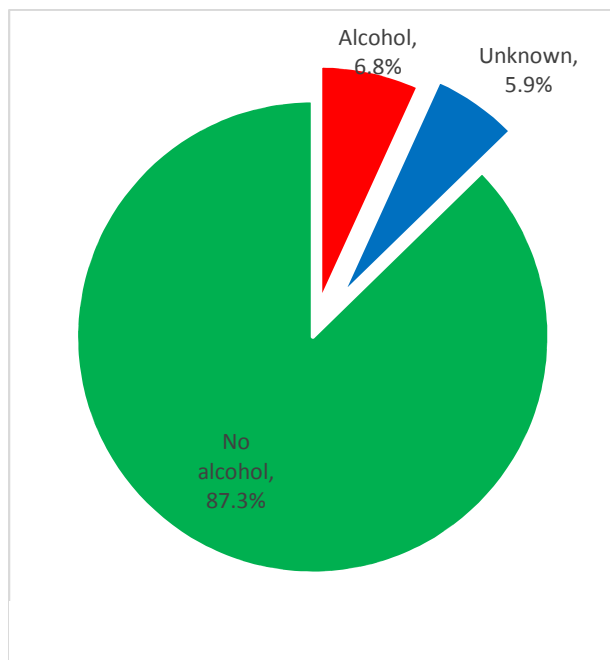


Figure 2.14: Property Damage Only Crashes, 2015

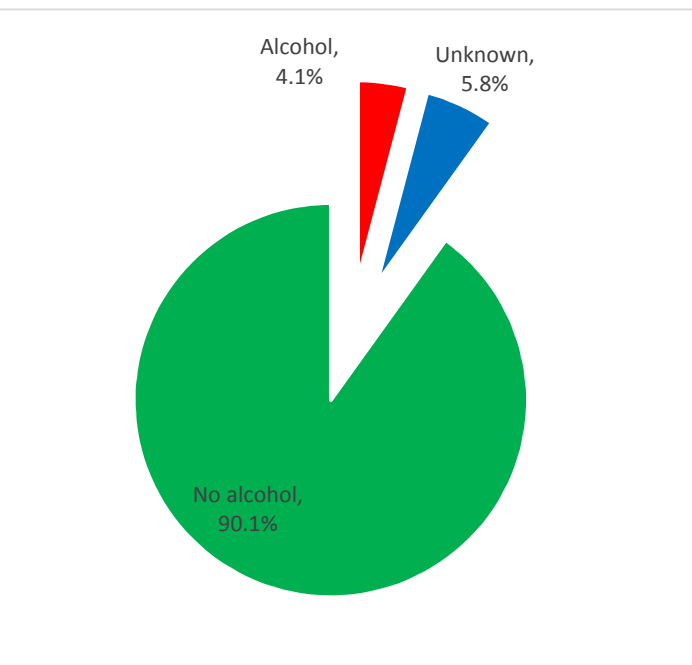
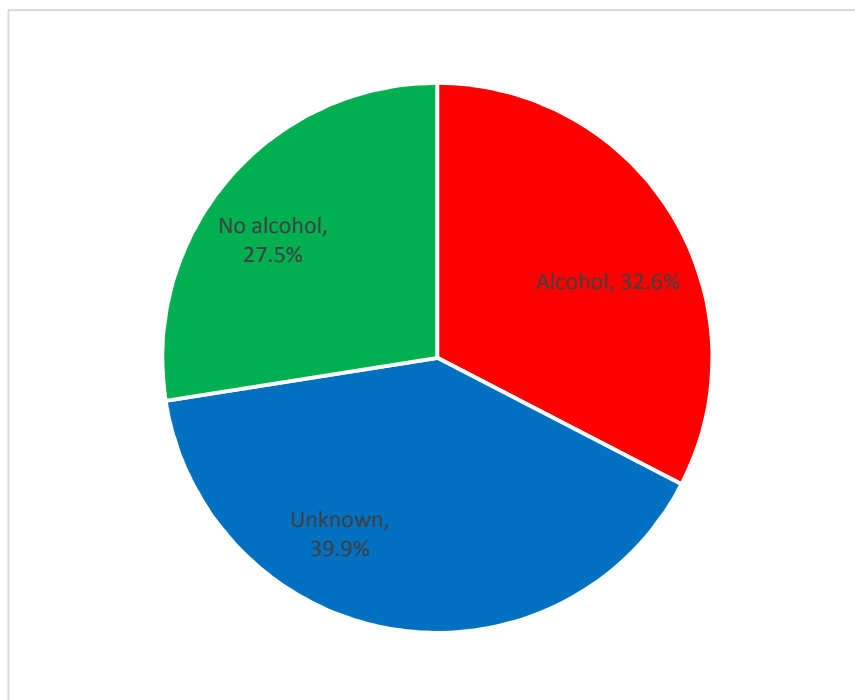


Figure 2.15: Fatal Crashes, 2015



## Economic Costs of Alcohol in the Workplace

Alcohol abuse has significant economic costs for employers across the state. Table 2.17 presents the costs of substance abuse in Nebraska by Industry Type. It also lists the Prevalence of Substance Use by Type of Industry. These costs include all substance abuse, but alcohol is the leading cause of substance use in Nebraska.

The industries with the highest prevalence of substance abuse (including alcohol) are construction and entertainment, recreation and food. The cost to these industries alone due to substance abuse is over \$63 million.

**Table 2.17: Estimated Employer costs of Substance Abuse (including Alcohol) in Nebraska, 2015**

Industry	Prevalence of Substance Use Disorder	Total Number of Employees in Industry	Lost Time	Job Turnover & Re-training	Healthcare	Total Cost
Agricultural, Forestry and Fishing	Moderate	55,411	\$1,082,385	\$2,757,120	\$5,637,276	\$9,482,166
Mining	Moderate	1,112	\$143,835	\$326,757	\$121,236	\$594,408
Construction	Highest	49,713	\$9,167,488	\$7,389,602	\$6,423,634	\$22,980,724
Manufacturing	Average or Below	97,465	\$13,968,245	\$15,301,995	\$9,734,168	\$39,020,538
Wholesalers	Average or Below	42,831	\$6,197,705	\$6,585,960	\$4,282,414	\$17,068,084
Retail	Moderate	109,523	\$15,852,603	\$16,895,697	\$11,706,720	\$44,467,149
Transportation & Utilities	Average or Below	61,551	\$2,023,808	\$7,370,208	\$5,970,952	\$15,370,184
Information & Communications	Moderate	17,502	\$7,382,382	\$7,804,342	\$1,863,056	\$17,049,780
Finance, Insurance & Real Estate	Moderate	72,962	\$8,778,510	\$9,941,475	\$7,579,518	\$26,299,503
Professional, Technical & Management	Moderate	66,226	\$20,325,996	\$9,727,496	\$7,220,936	\$37,274,428
Administration, Support & Waste Management	Moderate	87,908	\$6,377,796	\$20,498,824	\$8,98,882	\$35,866,144
Education, Health & Social Services	Average or Below	237,967	\$14,714,550	\$28,482,550	\$21,961,102	\$65,158,202
Entertainment, Recreation & Food	Highest	90,083	\$12,100,998	\$17,193,696	\$11,755,934	\$41,050,628
Government & Public Service	Average or Below	70,099	\$6,497,085	\$4,302,795	\$6,258,582	\$17,058,462

Source: Substance Abuse Disorder Costs for Employers Calculator  
<https://www.nsc.org/forms/substance-use-employer-calculator/index.aspx>

Table 2.18 lists the estimated number of employees in each industry in Nebraska impacted by alcohol abuse. Please review the methodology section of the report for more information about the Substance Abuse Cost Calculator.

**Table 2.18: Estimated Employer costs of Substance Abuse (including Alcohol) in Nebraska, 2015**

Industry	Prevalence of Substance Use Disorder	Total Number of Employees in Industry	Employees affected by Alcohol Abuse
Agricultural, Forestry and Fishing	Moderate	55,411	4,696
Mining	Moderate	1,112	121
Construction	Highest	49,713	6,966
Manufacturing	Average or Below	97,465	7,747
Wholesale	Average or Below	42,831	3,429
Retail	Moderate	109,523	9,777
Transportation & Utilities	Average or Below	61,551	4,590
Information & Communications	Moderate	17,502	1,622
Finance, Insurance & Real Estate	Moderate	72,962	6,678
Professional, Technical & Management	Moderate	66,226	6,436
Administration, Support & Waste Management	Moderate	87,908	7,053
Education, Health & Social Services	Average or Below	237,967	14,521
Entertainment, Recreation & Food	Highest	90,083	12,317
Government & Public Service	Average or Below	70,099	3,961

Source: Substance Abuse Disorder Costs for Employers Calculator

<https://www.nsc.org/forms/substance-use-employer-calculator/index.aspx>



## Alcohol-Related Legal Consequences

In addition to the lives impacted by alcohol use, alcohol use can place a tremendous strain on the legal system. For this report, legal consequences of alcohol use are separated into three categories, including (1) arrests, convictions, probation, and incarceration for driving under the influence (DUI), (2) arrests for alcohol-related crime (excluding DUI), and (3) children removed from home due to alcohol or drug use.

### *Alcohol-Related Legal Consequences: Driving Under the Influence (DUI) and Liquor Law Arrests*

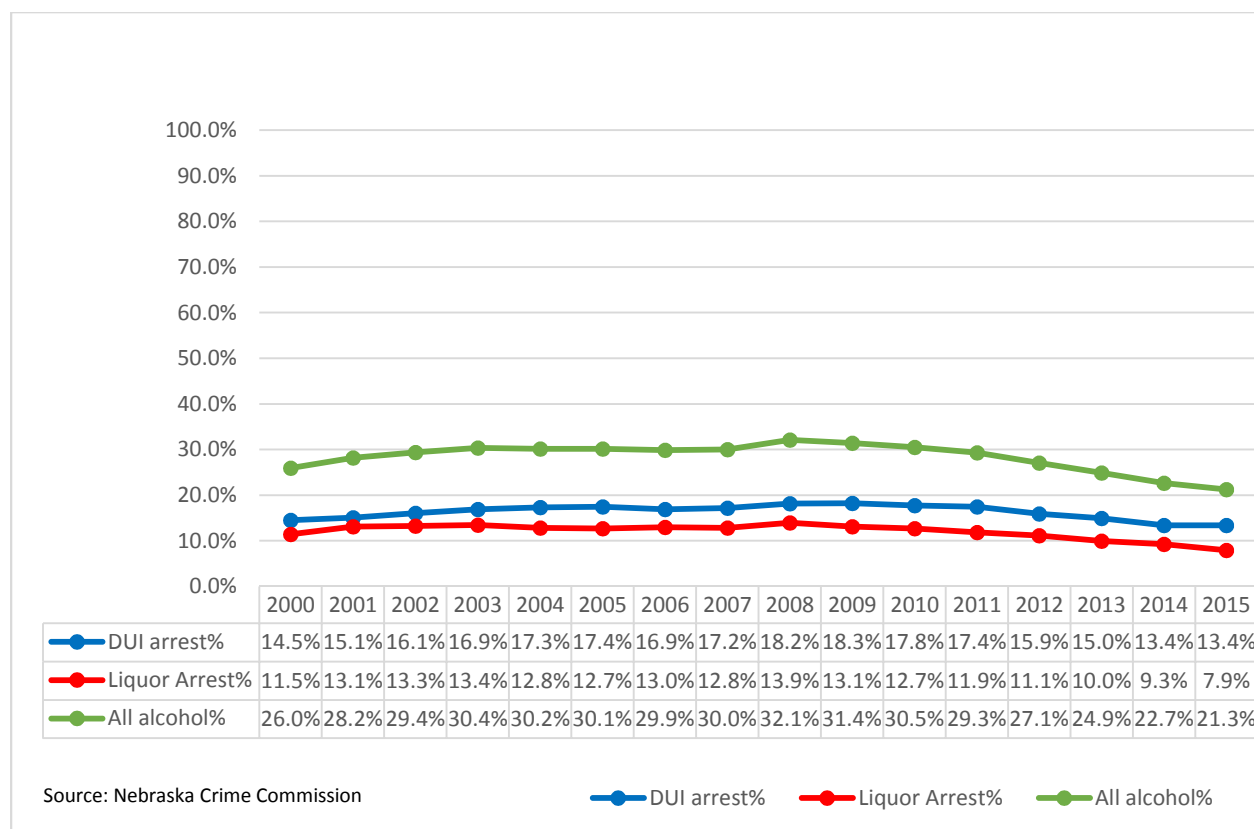
**Data Source:** Uniform Crime Reports, Nebraska Crime Commission

**Note:** DUI may contain legal consequences for driving under the influence of drugs and not alcohol

From 2000-2015, arrests for adult DUI and other liquor law offenses combined accounted for between 12,000 to 24,000 arrests per year in Nebraska. The percentage of alcohol arrests ranged from 26 percent in 2000 to 32 percent in 2008, before decreasing to 21.3 percent in 2015 (Figure 2.16).

Liquor law offenses include the violation of laws or ordinances prohibiting the manufacture, sale, purchase, transportation, possession, or use of alcoholic beverages including minor in possession.

Figure 2.16 Alcohol-Related Offenses as Percentage of All Adult Arrests, Nebraska, 2000-2015

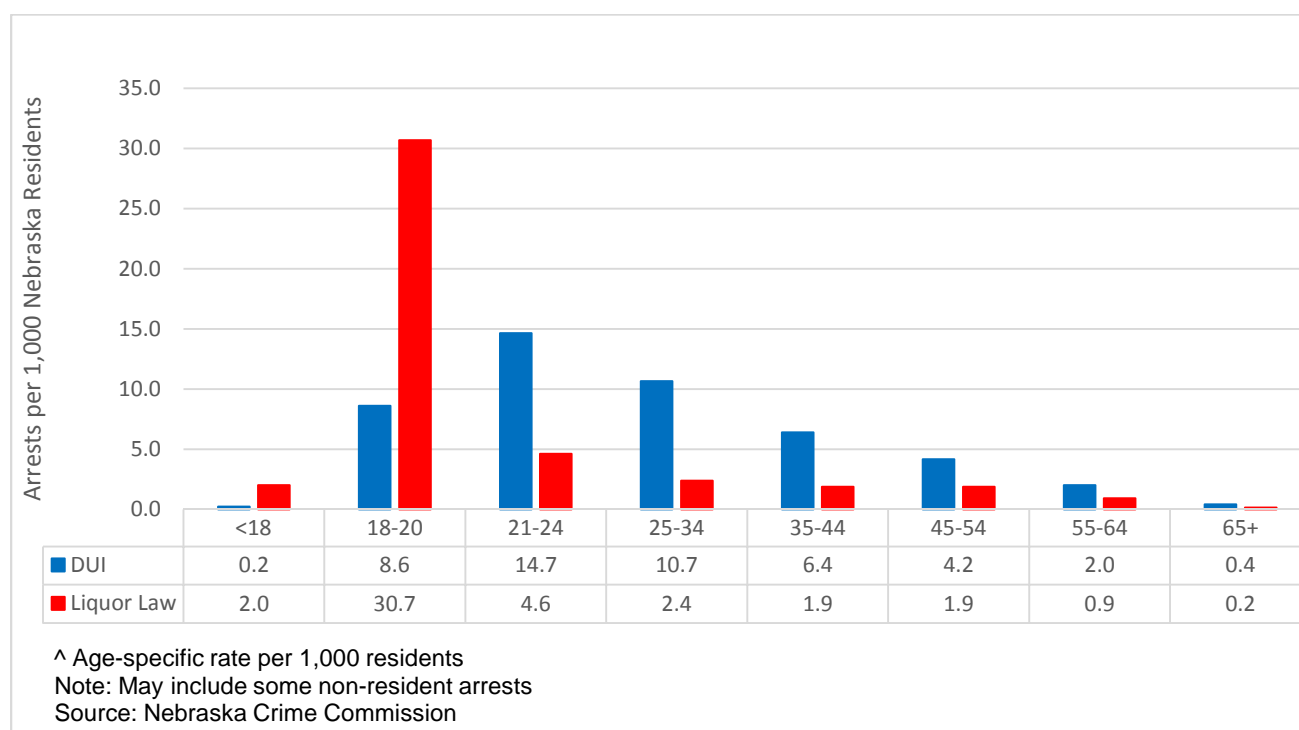


## Alcohol-Related Legal Consequences: Driving Under the Influence (DUI) and Liquor Law Arrests by Demographics

### Differences by Age

Persons in the 21-24 age range demographic group have had the highest DUI arrest rates while adults ages 18-20 have the highest liquor law arrest rates (Figure 2.17).

Figure 2.17: DUI and Liquor Law Arrest Rate per 1,000 Nebraska Residents^ by Age, 2015



### Differences by Gender

Males account for 76 percent of all DUI arrests and 69 percent of all liquor law violation arrests in 2015.

### Differences by Race/Ethnicity

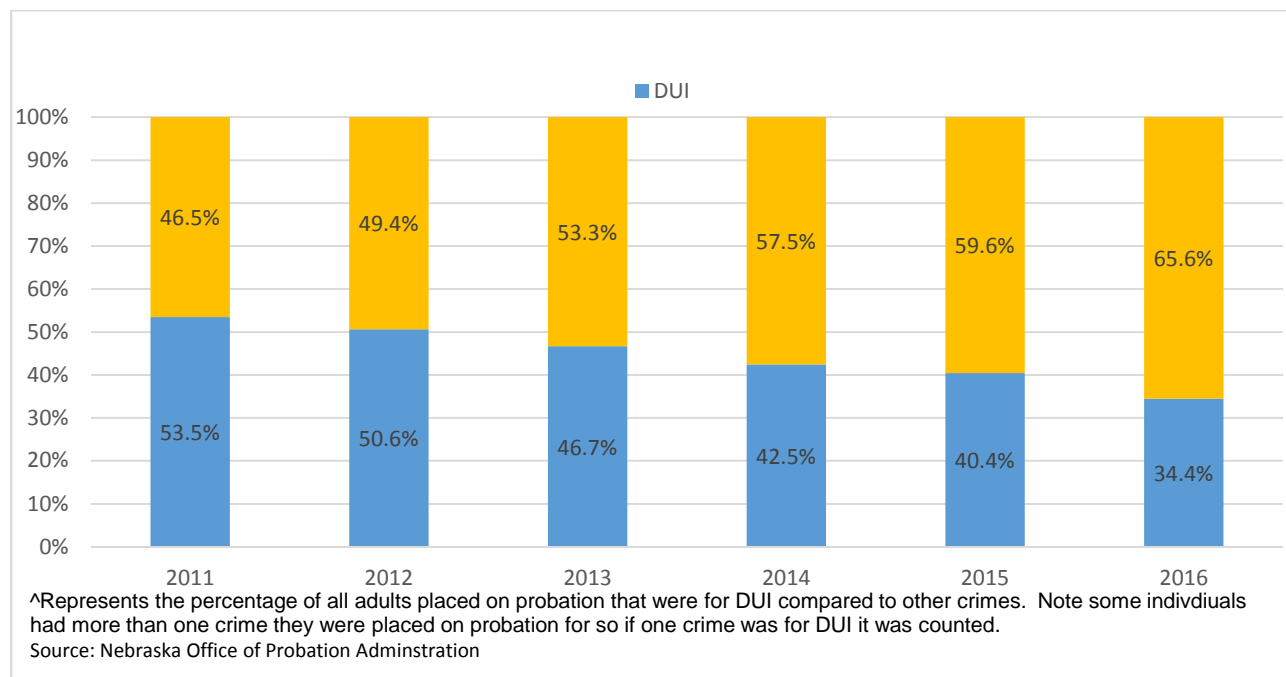
Of all the DUI offenders arrested in 2015, 87 percent were identified as white, 8.5 percent black, 1.8 percent Native American, 1.0 percent Asian, and 1.7 percent unknown. Liquor law arrests for the same period were identified as 82.2 percent white, 9.3 percent black, 4.0 percent Native American, 0.8 percent Asian, and 3.7 percent unknown.

### ***Alcohol-Related Legal Consequences: Probation for DUI***

**Data Source: Nebraska Office of Probation Administration**

Of the 9,362 adults sentenced to probation in Nebraska, more than 1 out of every 3 (34 percent) are for DUI (Figure 2.18). Driving under the influence continues to be the largest reason for a probation sentence from 2011 to 2016.

**Figure 2.18: Breakdown of Adult Probation Sentences by Crime<sup>^</sup>, 2011-2016**



### ***Alcohol-Related Legal Consequences: Incarceration for DUI***

In addition to the adult DUI probationers, 48 offenders were sentenced to Nebraska prisons from 2014 to 2016. Yearly sentences included 19 persons (2014) to 10 persons (2015) and 19 persons again in 2016. In 2016, the Nebraska Department of Corrections indicated that it costs \$31,271 to incarcerate an inmate for one year. At this rate, the cost to maintain the DUI offenders sentenced in 2016 amounts to nearly \$600,000 annually.

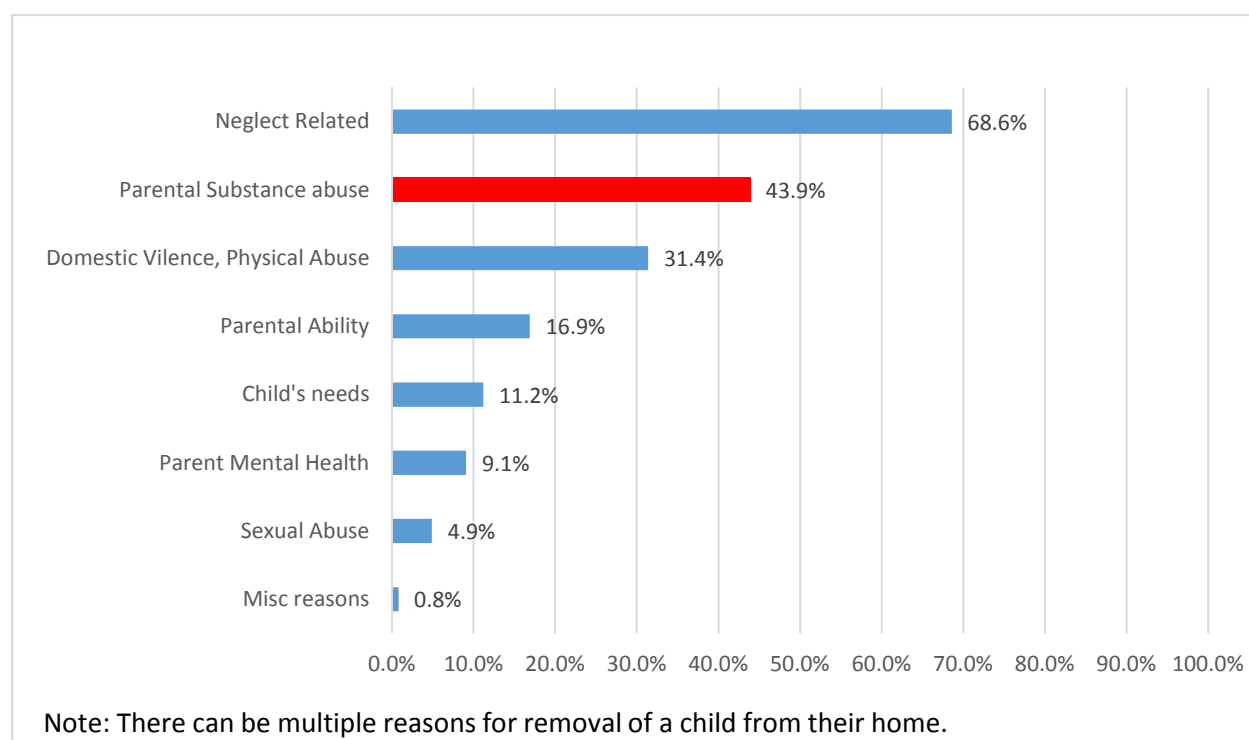
All newly admitted inmates (regardless of their offense) are asked to report drug use during the five years preceding their incarceration. For Fiscal Year 2015, 61.3 percent reported using alcohol in that timeframe, indicating alcohol use is very common among incoming inmates.

## Alcohol Use and Children Removed from Home

The Foster Care Review Office (FCRO) reviews all cases of children who are state wards in out-of-home-care. In their review, a significant number of children were removed due to substance use, including alcohol use.

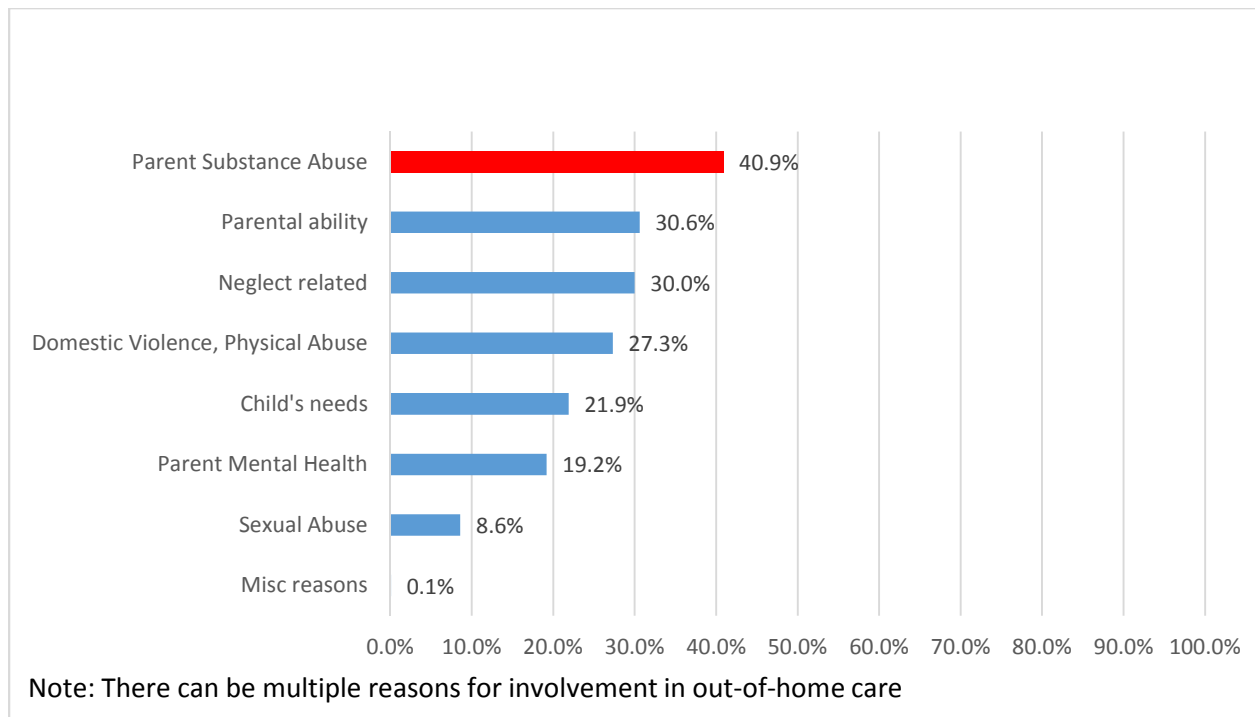
Nearly half (43.9 percent) of children involved in adjudication, or court involvement and intervention in out-of-home care were placed there due to parental substance use (Figure 2.19). Nearly one in ten (9.3 percent) were removed due to parental alcohol use, which is counted in the parental substance use category.

Figure 2.19: Major Categories of Adjudicated Reasons for Removal of a Child from Their Home



Based on case file reviews that were conducted by the FCRO, for 37 percent of children reviewed, there was indication of additional reasons for removal that were not included in the case. Some of these issues may be recognized at the beginning of the case but for different reasons they may not be included in the adjudication. Other issues may be discovered later in the case. If the root issues are not adequately addressed, it may be unsafe for the child to return to their home. The main non-adjudicated issue that still should be addressed was identified as parent substance use (40.9 percent) (Figure 2.20).

Figure 2.20: Major Categories of Non-Adjudicated Reasons for Involvement in Out-of-Home Care



# Alcohol Dependence, Abuse, and Treatment

## Alcohol Abuse and Dependence

Dependence and abuse are clinical terms used to characterize patterns of alcohol use associated with significant social, psychological and physical problems for the user and/or others that may be affected by the user. The National Survey on Drug Use and Health (NSDUH) defines alcohol dependence and abuse using criteria stated in the American Psychiatric Association's Diagnostic and Statistical Manual of Mental Disorders (DSM-IV).

### Alcohol Dependence and Abuse Indicator Summary

Indicator	Data Source	Year	Nebraska	Estimated Persons	Nation	Nebraska vs. Nation	Trend
Alcohol dependence or abuse in past year among persons 12 and older	NSDUH	2014-15	6.85%	97,000	6.14%	Non-significant	Decreasing

### Current Levels of Alcohol Dependence or Abuse in Nebraska

In 2014-15, nearly 1 in every 14 Nebraskans, 12 years of age and older (6.9 percent), an estimated 97,000 people, reported alcohol dependency or abuse.

### Compared to the Nation

In 2014-15, adults in Nebraska were more likely than adults nationally to report alcohol dependency or abuse, 6.9 percent and 6.1 percent, respectively, but the difference is non-significant.

### Trends

Table 2.19 shows the percentage of Nebraska and U.S. adults 12 and older who meet the definition of alcohol dependence or abuse from the DSM-IV. While the U.S. as a whole has seen a slight decrease in the percent who classified as dependent or abusing alcohol, Nebraska has seen a more significant decrease from 2003. Nebraska has still, except for 2010-11, always had a rate of alcohol dependency or abuse higher than the U.S. average.

**Table 2.19: Percentage of Respondents Classified as Dependent or Abusing Alcohol NE vs U.S. 12 and older**

	2-Year Period												
	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
NE	10.2%	9.3%	9.5%	9.7%	8.9%	8.6%	8.5%	7.6%	6.3%	7.2%	7.8%	7.5%	6.9%
U.S.	7.6%	7.6%	7.7%	7.7%	7.6%	7.4%	7.4%	7.3%	6.8%	6.6%	6.7%	6.5%	6.1%

Source: National Survey on Drug Use and Health

### ***Alcohol Dependence Abuse, and Treatment: Alcohol Abuse and Dependence by Age Group***

Table 2.20 shows the percentage of Nebraska residents who meet the definition of alcohol dependence or abuse from the DSM-IV by age group. Nebraskans ages 18-25 have the highest rates for being dependent on or abusing alcohol from 2003 to 2015. Nebraskans ages 18-25 have also seen a decrease in the percent who are dependent or abusing alcohol however, there was a slight increase in 2012. Nebraskans ages 12-17 have also seen a decrease but it is smaller than those age 18-25. Those ages 26 and older, however, have seen a slight increase from 2011 to 2013 and then stable rates to 2015.

**Table 2.20: Percentage of Respondents Classified as Dependent or Abusing Alcohol by Age Group**

2-Year Period													
	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
12-17	8.9%	8.2%	7.5%	7.0%	6.6%	6.4%	5.7%	4.6%	3.8%	3.9%	3.9%	2.8%	2.3%
18-25	25.2%	22.3%	23.6%	23.7%	20.9%	19.5%	19.0%	18.0%	15.5%	15.9%	16.5%	15.8%	13.3%
26+	7.5%	6.9%	7.0%	7.3%	6.9%	6.8%	6.8%	6.0%	5.0%	6.0%	6.8%	6.6%	6.3%

Source: National Survey on Drug Use and Health

***Alcohol Dependence Abuse, and Treatment:  
Adults in Need of Treatment but not Receiving Treatment***

The National Survey on Drug Use and Health (NSDUH) asked respondents that indicated they needed treatment for alcohol use if they were receiving treatment.

***Adults in Need of Treatment for Alcohol but not Receiving Treatment Indicator Summary***

Indicator	Data Source	Year	Nebraska	Estimated Persons	Nation	Nebraska vs. Nation	Trend
Needing treatment for alcohol but not receiving any in past year among persons 12 and older	NSDUH	2013-14*	7.2%	112,000	6.2%	Non-significant	Decreasing

\*Note: Due to NSDUH survey changes, this is the most recent data available for this question

***Current Levels of Alcohol Dependence or Abuse in Nebraska***

In 2013-14, nearly 1 in every 14 Nebraskans aged 12 and older (7.2 percent), an estimated 112,000 people, reported needing treatment for alcohol but not receiving any.

***Compared to the Nation***

In 2013-14, adults in Nebraska were more likely than adults nationally to report alcohol dependence or abuse, 7.2 percent and 6.2 percent, respectively, but the difference is non-significant.

***Trends***

Table 2.21 shows that Nebraska has had a higher percent than the nation of persons indicating they needed treatment for alcohol use but not receiving it for every year except 2010-2011. Nebraska saw a decrease of those that indicated they needed but didn't receive treatment for alcohol since 2002-2003.

**Table 2.21: Percent of Respondents Needing but not Receiving Treatment for Alcohol Use, NE vs U.S.**

2-Year Period												
	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
NE	9.5%	8.9%	9.0%	9.1%	8.3%	8.2%	8.2%	7.4%	6.1%	6.8%	7.6%	7.2%
US	7.2%	7.3%	7.4%	7.3%	7.2%	7.1%	7.0%	6.9%	6.4%	6.3%	6.4%	6.2%



### ***Alcohol Dependence Abuse and Treatment: Adults in Need of Treatment by Age***

Table 2.22 shows the percentage of Nebraska residents who indicated a need for treatment for alcohol use but were not receiving it by age group. Nebraskans aged 18-25 had the highest percent of those indicating they needed treatment for alcohol use but were not receiving it.

Nebraskans ages 12-17 and those 18-25 have seen a substantial decrease in the percent who need treatment for alcohol use but are not receiving it. Conversely, adults aged 26 and older have seen a gradual increase.

**Table 2.22: Percent of Respondents Needing but not Receiving Treatment for Alcohol Use by Age Group.**

2-Year Period												
	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
12-17	8.4%	7.8%	7.2%	6.5%	6.1%	6.1%	5.5%	4.4%	3.7%	3.6%	3.6%	2.5%
18-25	23.2%	21.0%	22.4%	22.4%	19.6%	18.4%	18.5%	17.8%	15.3%	15.1%	15.7%	14.7%
26+	7.0%	6.7%	6.6%	6.9%	6.5%	6.6%	6.6%	5.8%	4.7%	5.7%	6.7%	6.4%

### ***Alcohol Dependence Abuse, and Treatment: Alcohol Treatment***

**Source:** Centralized Data System, Nebraska Division of Behavioral Health

Treatment data presented in this report include services funded through the NDHSS, Division of Behavioral Health (DBH), as well as select private treatment services that submit patient data to the state.

In 2016, there were 20,824 substance abuse treatment admissions among 10,379 individuals. During admission, individuals were asked to report their primary, 2<sup>nd</sup> and 3<sup>rd</sup> drugs of choice. The following information is based on data from those who reported drug of choice on their admission form.

#### ***Alcohol Involvement in Substance Abuse Treatment Services***

- In 2016, alcohol was listed as the primary drug of choice in 56.2 percent of adult admissions in Nebraska, and was listed as one of the top three drugs of choice in 72.7 percent of all admissions. Alcohol was followed by methamphetamine (primary drug of choice during 19.7 percent of admissions).
- Alcohol has consistently been listed as the primary drug of choice from 2011 (69.7 percent) to 2016 (56.2 percent) although it has decreased slightly.
- In 2016, males in Nebraska were more likely than females to report alcohol as their primary drug of choice (62.4 percent and 42.8 percent respectively) as well as to report alcohol as one of their top three drugs of choice (77.7 percent and 61.7 percent respectively).

### Treatment Admission Demographics

Table 2.23 provides the demographics for all substance use treatment admissions (regardless of their drug of choice) for gender, age, race, and urban/rural.

**Table 2.23: Demographics of Individuals Admitted for Substance Use Treatment in Nebraska, 2016**

Demographics of Individuals Admitted for Substance Use Treatment in Nebraska, 2016					
	<u>Number</u>	<u>Percent</u>		<u>Number</u>	<u>Percent</u>
Total	10,379	100.0%	Gender		
			Male	7,232	69.7%
Race/Ethnicity*			Female	3,133	30.2%
NH Asian	73	0.7%			
NH Black	1,037	10.0%	Age		
NH Multi-Racial	71	0.7%	<12	2	0.0%
NH Native American/Native Hawaiian	488	4.7%	12-17	184	1.8%
NH White	7,455	71.8%	18-20	830	8.0%
Hispanic**	923	8.9%	21-24	1,539	14.8%
Other/Unknown	332	3.2%	25-34	3,568	34.4%
			35-44	2,123	20.5%
Urban Rural			45-54	1,413	13.6%
Large Urban	6,094	58.7%	55-64	625	6.0%
Small Urban	2,707	26.1%	65+	94	0.9%
Rural	1,251	12.1%	Unknown	1	0.0%
*NH indicates Non-Hispanic					
**Hispanics can be of any race					
Note: Numbers represent individuals, not the number of admissions					
Source: Centralized Data System, Nebraska Division of Behavioral Health					

### References Alcohol Use

National Institute on Alcohol Abuse and Alcoholism. Alcohol Alert, Underage Drinking Number 67, January 2006. Retrieved October 2017 from <https://pubs.niaaa.nih.gov/publications/AA67/AA67.htm>

## Section 3:

### Tobacco Use in Nebraska:

### Prevalence and Consequences



# ***Tobacco – Summary of Key Findings***

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## ***Tobacco Use in Nebraska***

*Cigarette smoking is the most common form of tobacco use.*

- Cigarette smoking among Nebraska residents 18 and older was similar to their national counterparts, with 17.1 percent of adults currently smoking cigarettes in 2015 compared to 17.5 percent nationwide.
- In 2015, nearly 1 in every 7 Nebraska high school students smoked cigarettes during the past month (13.3 percent), which is higher than the national average of 10.8 percent although the difference is not statistically significant.
- Since 2011, cigarette smoking has declined among high school students and adults.

*Cigarettes are a commonly sold product in Nebraska and have a higher per capita sales rate than the U.S. as a whole.*

- Nebraska has seen an overall decrease in the estimated sales of tobacco, similar to the U.S. as a whole.
- Nebraska has a higher per capita rate of cigarette sales than the U.S. as a whole since 2008.

*Although less common than smoking, smokeless tobacco use remains relatively common.*

- In 2015, nearly one in every 10 Nebraska high school students used smokeless tobacco during the past month (9.3 percent) while about one in every 20 adults (5.5 percent) reported past month use in 2015.
- Smokeless tobacco use among youth in Nebraska was similar to residents nationally while for adults it was significantly higher than the national average.
- Since the 2011, smokeless tobacco use appears to have remained relatively stable among both adults and high school students.

*E-cigarette and vapor products are becoming more common, especially among youth.*

- E-cigarette smoking among Nebraska residents 18 and older was similar to their national counterparts, with 4.9 percent of adults currently smoking e-cigarettes in 2016 compared to 4.7 percent nationwide.
- In 2015, more high school students smoked e-cigarettes during the past month (22.3 percent) than cigarettes (13.3 percent). Nebraska youth are very similar to the national average of 24.1 percent for electronic vapor product use in the past month.

## ***Consequences of Tobacco Use in Nebraska***

*Cigarette smoking is a major contributor to death and medical care.*

- Smoking killed an estimated 2,500 Nebraska residents in 2016.
- In 2016, an estimated \$795 million was spent for smoking-related medical costs among Nebraska residents.

## ***Demographic Differences***

### *Differences by age*

- Residents between the ages of 18 and 34 were more likely to use tobacco products; although, as a result of the long latency period for health consequences from tobacco use, older residents were the most likely to die or be hospitalized as a result of tobacco use.

### *Differences by gender*

- Adult males are more likely to smoke cigarettes than females but there is no difference between genders for high school youth.
- Smokeless tobacco use is higher for males for both adults and high school students.
- There was no difference in E-cigarette or electronic vapor use between males and females both for adults and youth.

### *Differences by urban/rural.*

- Among Nebraska adults, cigarette smoking was slightly higher for urban small counties while smokeless tobacco use was more common in rural Nebraska counties.

### *Differences by race/ethnicity.*

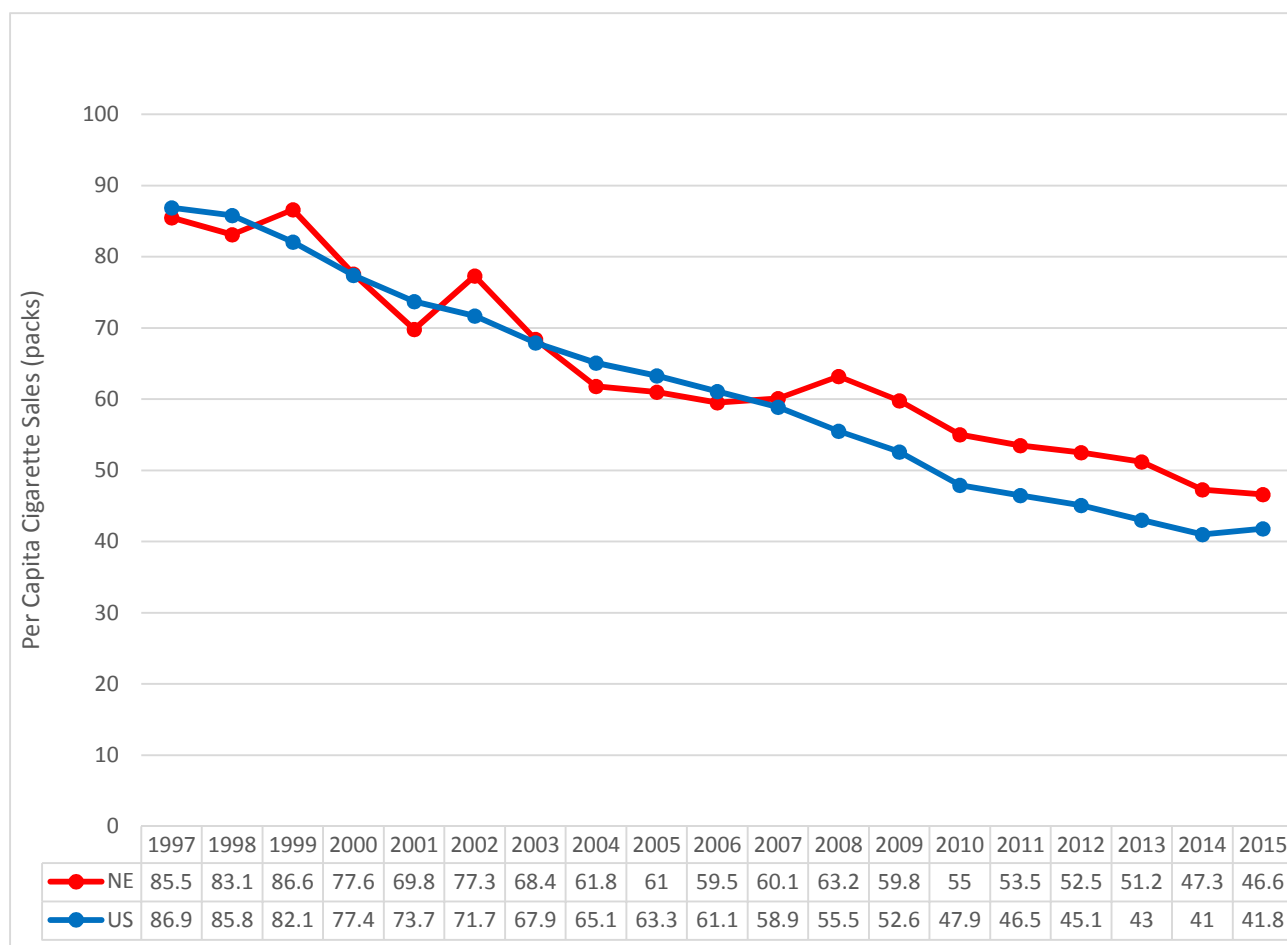
- Native American adults reported a higher percentage of current cigarette use compared to African Americans and whites.
- There was no significant difference by race/ethnicity (when adjusting by age) for smokeless tobacco use.

## Tobacco Consumption: General Consumption Patterns and Concerns

Tobacco use, (including cigarette smoking, cigar and pipe smoking, and smokeless tobacco use), is the single most preventable cause of death and disease in society and has a massive impact on the public's health<sup>1</sup>. The adverse health effects from cigarette smoking account for an estimated 443,000 deaths every year the United States and another 8.6 million suffer from a serious illness as a result of smoking each year<sup>1</sup>.

Tobacco sales data in Nebraska is collected at the wholesale level. Estimates are based on the number of packs of cigarettes sold, not necessarily the number of packs consumed. Nebraska has seen an overall decrease in the estimated sales of tobacco per person, similar to the U.S. as a whole, since 1997 from 85.5 to 46.6 in 2015 (Figure 3.1). Nebraska does have higher per capita cigarette sales than the U.S. as a whole since 2008.

Figure 3.1 Per Capita Cigarette Sales<sup>^</sup> (in packs), Nebraska vs. U.S. 1997-2015



<sup>^</sup>Per capita sales among persons of all ages at the wholesaler (not retailer) level

Source: The Tax Burden on Tobacco, Volume 49, 2014, prepared by Orzechowski and Walker, Arlington, VA

# Adult Tobacco Consumption

## Past Month Cigarette Use

### Current cigarette use indicator summary

Indicator	Data Source	Year	Nebraska	Estimated Persons	Nation	Nebraska vs. Nation	Trend
Current cigarette use among adults 18 and older	BRFSS	2015	17.1%	244,000	17.5%	Non-significant	Decreasing

### Current cigarette use in Nebraska

In 2015, approximately 1 in every 6 Nebraska adults (17.1 percent), an estimated 244,000 adults, reported current cigarette use. Current cigarette use is defined as reported smoking at least 100 cigarettes in their lifetime and reported smoking every day or some days.

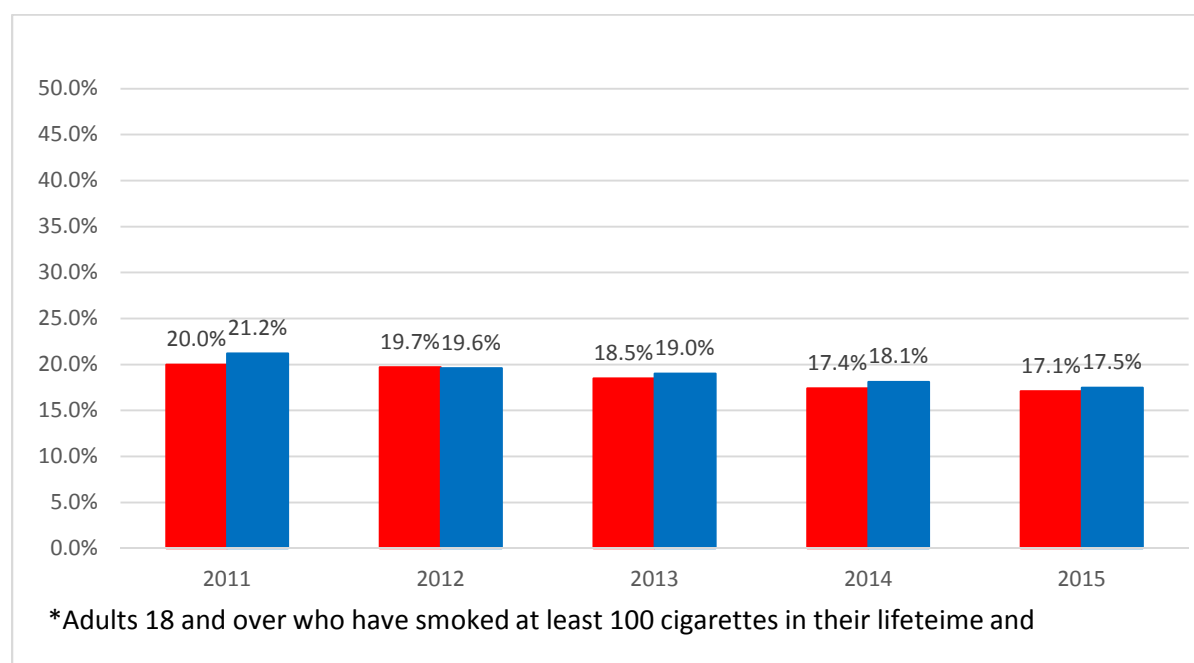
### Compared to the nation

In 2015, adults in Nebraska smoking cigarettes at a rate similar to adults nationally, 17.1 percent and 17.5 percent, respectively.

### Trends

Figure 3.2 shows the percent of adults who currently smoke cigarettes in Nebraska and the United States. From 2011 to 2015 the rate of cigarette use has been nearly the same for both Nebraska and the United States. There has been a small but statistically significant decrease in the percent of adults who reported cigarette use in the past 30 days in Nebraska.

Figure 3.2 Current cigarette smoking\* among adults, Nebraska and U.S., 2011-2015

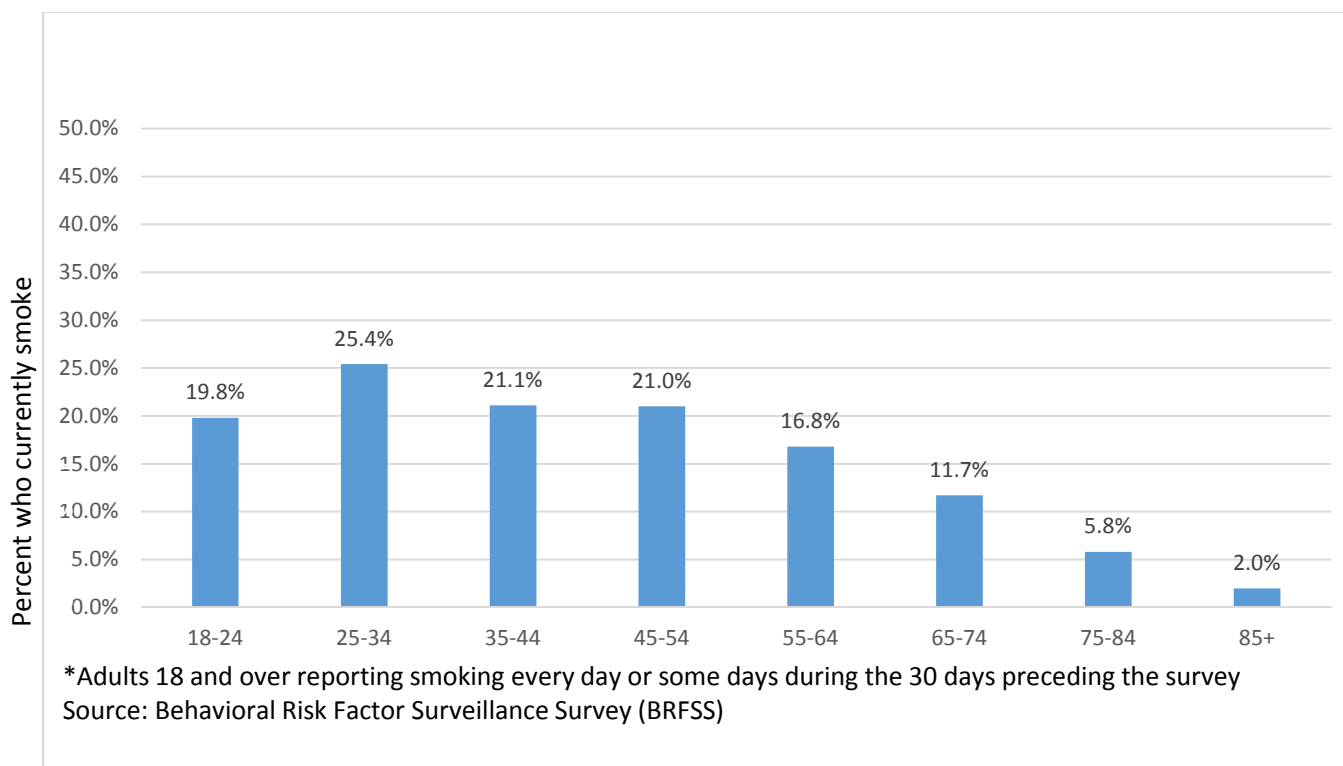


## ***Adult Tobacco Consumption in Nebraska: Past Month Cigarette Use by Demographics***

### ***Differences by age***

Figure 3.3 compares the percent of adults who smoked cigarettes in the past month by age group from 2011 to 2015. Nebraskans aged 25-34 had the highest percentage of current cigarette use while current cigarette use begins to decrease at age 35 and continues to decline among older Nebraskans.

**Figure 3.3: Adult\* current cigarette smoking by age, 2011-2015**



### ***Differences by gender***

Between 2011 and 2015, males are significantly more likely (20.0 percent) to report current cigarette smoking than females (17.0 percent).

### ***Differences by urban/rural***

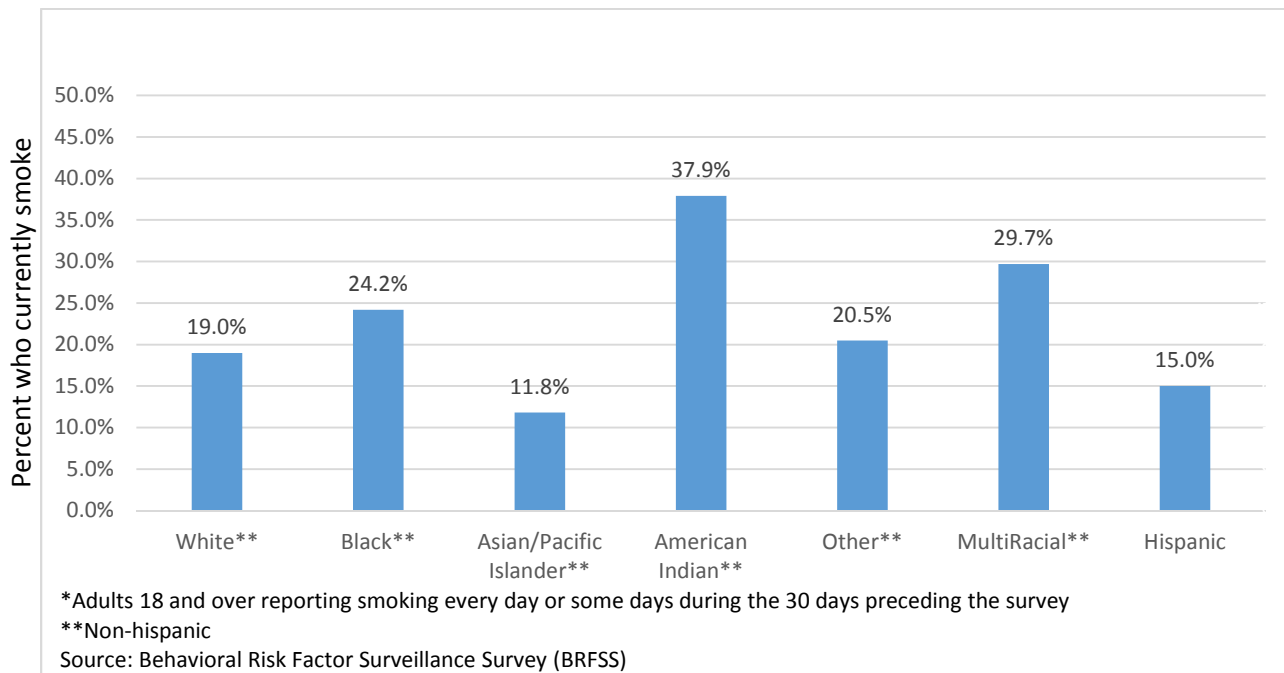
Between 2011 and 2015, residents of urban-small counties reported the highest (20.2 percent) rate of current smoking which was significantly higher than residents of rural counties (18.6 percent) and urban large counties (18.6 percent).

### ***Differences by race/ethnicity***

Between 2011 and 2015, beyond differences in age (using age-adjustment), American Indian (37.9 percent) adults and Multi-Racial (29.7 percent) adults reported the highest percentage, making them more likely than adults of all other racial and ethnic groups to smoke cigarettes. African Americans (24.2 percent) reported the next highest percentages followed by Whites (19.0 percent) with Hispanics (15 percent) and Asians (11.8 percent) having the lowest reported cigarette use (Figure 3.4)



Figure 3.4: Current cigarette use (age-adjusted) among Nebraska adults\* by race/ethnicity 2011-2015 Combined



## ***Adult Tobacco Consumption in Nebraska: Past Month Smokeless Tobacco Use***

### ***Current smokeless tobacco use indicator summary***

<b>Indicator</b>	<b>Data Source</b>	<b>Year</b>	<b>Nebraska</b>	<b>Estimated Persons</b>	<b>Nation</b>	<b>Nebraska vs. Nation</b>	<b>Trend</b>
Current smokeless tobacco use among adults 18 and older	BRFSS	2015	5.5%	78,000	4.0%	Higher	Stable

### ***Current smokeless tobacco use in Nebraska***

In 2015, approximately 1 in every 20 Nebraska adults (5.5 percent), an estimated 78,000 adults, reported currently using smokeless tobacco every day or on some days.

### ***Compared to the nation***

In 2015, adults in Nebraska were slightly more likely to use smokeless tobacco than adults nationally, 5.5 percent and 4.0 percent, respectively.

### ***Trends***

The percent of Nebraskans who use smokeless tobacco has been relatively stable from 2011 to 2015.

## ***Adult Tobacco Consumption in Nebraska: Past Month Smokeless Tobacco Use by Demographics***

### ***Differences by age***

Nebraskans ages 18-24 had the highest percentage of current smokeless tobacco use while current smokeless tobacco use begins to decrease at age 25 and continues to decline among older Nebraskans.

### ***Differences by gender***

Between 2011 and 2015, males are ten times more likely (9.7 percent) to report they current use smokeless tobacco than females (0.9 percent).

### ***Differences by urban/rural***

Between 2011 and 2015, there was a significant difference between urban and rural counties. Residents of rural counties reported the highest (8.5 percent) rate of current smokeless tobacco, which was significantly higher than more urban counties. Residents of urban small counties reported a lower rate of current use of smokeless tobacco (6.8 percent), but it was still significantly higher than residents of urban-large counties (4.0 percent).

### ***Differences by race/ethnicity***

Between 2011 and 2015, beyond differences in age (using age-adjustment), there was not much difference between races and ethnicities. Whites (6.0 percent) and Multi-Racial (6.2 percent) residents reported the highest percentage. Black (2.9 percent), other (1.5 percent) and Hispanic (2.4 percent) reported the lowest percentage.

## ***Adult Tobacco Consumption in Nebraska: Past Month E-Cigarette Use***

### ***Current e-cigarette use indicator summary***

Indicator	Data Source	Year	Nebraska	Estimated Persons	Nation	Nebraska vs. Nation	Trend
Current e-cigarette use among adults 18 and older	BRFSS	2016	4.9%	70,000	4.7%	Non-significant	NA

### ***Current e-cigarette use in Nebraska***

In 2016, approximately 1 in every 20 Nebraska adults (4.9 percent), an estimated 70,000 adults, reported currently using e-cigarettes every day or on some days.

### ***Compared to the nation***

In 2016, adults in Nebraska were similar to other adults nationally in their use of e-cigarettes, 4.9 percent and 4.7 percent, respectively.

### ***Trends***

As this is a new measure, there is not current trend data.

## ***Adult Tobacco Consumption in Nebraska: Past Month E-Cigarette Use by Demographics***

### ***Differences by age***

Nebraskans ages 18-24 had the highest percentage of current e-cigarette use (10.4 percent) while current cigarette use begins to decrease at age 25 and continues to decline among older Nebraskans.

### ***Differences by gender***

In 2016, there was no significant difference between males (5.3 percent) and females (4.5 percent) in current e-cigarette use.

### ***Differences by urban/rural***

This information is not available due to only one year of data being used.

### ***Differences by race/ethnicity***

This information is not available due to only one year of data being used.

# Youth Tobacco Consumption

## ***Past Month Cigarette Use***

Similar to alcohol rates, looking from a lifetime perspective provides information on understanding experimentation with cigarette use, 30-day use rates provide a better estimate of recent and/or current cigarette use.

### *Current cigarette use by youth indicator summary*

Indicator	Data Source	Year	Nebraska	Estimated Persons	Nation	Nebraska vs. Nation	Trend	Lifetime Cigarette Use Nebraska
Past month cigarette use among youth in grades 9-12	YRBS	2015	13.3%	13,000	10.8%	Non-Significant	Decreasing	31.4%

### *Current cigarette use in Nebraska among youth*

In 2015, approximately 1 in 7 Nebraska high school students (13.3 percent), an estimated 13,000 youth, reported smoking cigarettes in the past month.

### *Compared to the nation*

In 2015, youth in Nebraska were more likely than youth nationally to currently use cigarettes, 13.3 percent and 10.8 percent, respectively but the difference was not statistically significant.

### *Trends*

There has been a decline in the rate of past-month use by high school students. In 2005, nearly one out of every five (21.8 percent) reported smoking cigarettes in the past month, but in 2015 it dropped to 13.3 percent who reported smoking cigarettes in the past month.

## ***Youth Tobacco Consumption: Past Month Cigarette Use by Demographics***

### *Differences by grade*

Older youth were more likely than younger youth to have smoked cigarettes in the past 30 days. In 2015, 4.2 percent of 9<sup>th</sup> grade youth reported using cigarettes in the past month while 18.7 percent of 12<sup>th</sup> grade youth reported using cigarettes in the past month.

### *Differences by gender*

There was no significant difference between males and females in past month cigarette smoking among youth. In 2015, 14.2 percent of males reported smoking cigarettes in the past month while 12.2 percent of females reported smoking cigarettes in the past month.

### ***Youth Tobacco Consumption: Past Month Smokeless Tobacco Use***

In addition to looking at cigarette use, the YRBS asked youth if they have used smokeless tobacco in the past 30 days. Smokeless tobacco includes chewing tobacco, snuff or dip.

#### ***Current smokeless tobacco use by youth indicator summary***

Indicator	Data Source	Year	Nebraska	Estimated Persons	Nation	Nebraska vs. Nation	Trend
Past month smokeless tobacco use among youth in grades 9-12	YRBS	2015	9.3%	9,000	7.3%	Non-significant	Stable

#### ***Current smokeless tobacco use in Nebraska among youth***

In 2015, approximately 1 in 11 of Nebraska high school students (9.3 percent), an estimated 9,000 youth, reported using smokeless tobacco in the past month.

#### ***Compared to the nation***

In 2015, youth in Nebraska were more likely than youth nationally to use smokeless tobacco (9.3 percent and 7.3 percent, respectively), but the difference was not statistically significant.

#### ***Trends***

Unlike several other tobacco measures, there is no significant change in past month smokeless tobacco use. In 2005, 8.7 percent reported past month smokeless tobacco use while in 2015, 9.3 percent reported past month smokeless tobacco use.

### ***Youth Tobacco Consumption: Past Month Smokeless Tobacco Use by Demographics***

#### ***Differences by grade***

Similar to other tobacco measures older youth were more likely than younger youth to report past-month smokeless tobacco use. In 2015, 2.3 percent of 9<sup>th</sup> graders reported currently using smokeless tobacco, while 13.8 percent of 12<sup>th</sup> graders reported current use.

#### ***Differences by gender***

Unlike other tobacco use questions, there was a significant difference between males and females in past month smokeless tobacco use. In 2015, 14.9 percent of males reported past-month smokeless tobacco use, while only 3.2 percent of females reported past-month smokeless tobacco use.

### ***Youth Tobacco Consumption: Past Month Electronic Vapor Product Use***

In 2015, the YRBS asked youth if they have used electronic vapor products in the past 30 days. These include e-cigarettes, e-cigars, e-pipes, vape pens, vaping pens, e-hookahs and hookah pens on at least 1 day during the 30 days before the survey.

#### ***Current smokeless tobacco use by youth indicator summary***

Indicator	Data Source	Year	Nebraska	Estimated Persons	Nation	Nebraska vs. Nation	Trend	Lifetime Vapor Product Use
Past month electronic vapor product use among youth in grades 9-12	YRBS	2015	22.3%	22,000	24.1%	Non-significant	NA	38.2%

#### ***Current smokeless tobacco use in Nebraska among youth***

In 2015, nearly 1 in 4 of Nebraska high school students (22.3 percent), an estimated 22,000 youth, reported using electronic vapor products in the past month.

#### ***Compared to the nation***

In 2015, youth in Nebraska were similar to youth nationally in their use of electronic vapor products; 22.3 percent and 24.1 percent, respectively.

#### ***Trends***

As this is a new question, there is no trend data available

### ***Youth Tobacco Consumption: Past-Month Electronic Vapor Product Use by Demographics***

#### ***Differences by grade***

Similar to other tobacco measures, older youth were more likely than younger youth to report past-month electronic vapor product use. In 2015, 12.1 percent of 9<sup>th</sup> graders reported currently using electronic vapor products while 27.5 percent of 12<sup>th</sup> graders reported using electronic vapor products in the past month.

#### ***Differences by gender***

There was no significant difference between males and females in past-month electronic vapor product use among youth. In 2015, 21.2 percent of males reported using electronic vapor products, while 22.8 percent of females reported using electronic vapor products.

## Consequences of Tobacco Consumption:

### Introduction

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Each year cigarette smoking, as well as using other forms of tobacco, contributes to a large number of chronic disease deaths, including deaths due to cancer, cardiovascular disease and respiratory disease.

#### ***Tobacco-Related Mortality and Morbidity: Deaths and Medical Costs due to Smoking***

##### *Smoking-related death indicator summary*

Indicator	Data Source	Year	Number of Deaths Nebraska*
Smoking-related death estimate	CDC*	2016	2,500

\* Centers for Disease Control and Prevention. *Best Practices for Comprehensive Tobacco Control Programs—2014*. Atlanta: U.S. Department of Health and Human Services, Center for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2014;

The Center for Disease Control (CDC) estimates the deaths each year attributable to smoking. In 2016, it was estimated that 2,500 Nebraska residents died due to smoking. In addition, the CDC estimates that 38,000 youth ages 0-17 are projected to die due to smoking.

In addition to the mortality due to smoking, there are additional medical costs from smoking-related diseases. The CDC estimated that in 2016, \$795 million will be spent on medical costs due to smoking<sup>2</sup>.

The CDC has recently updated its estimates to better account for smoking related deaths. As a result there is no trend data available for this report.

#### **References Tobacco Use**

1. Centers for Disease Control and Prevention. CDC Vital Signs, Tobacco Use, September 2010. Retrieved July 2015 from <http://www.cdc.gov/vitalsigns/TobaccoUse/Smoking/index.html>
2. Centers for Disease Control and Prevention. *Best Practices for Comprehensive Tobacco Control Programs—2014*. Atlanta: U.S. Department of Health and Human Services, Center for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2014;



## Section 4:

### Illicit Drug Use in Nebraska:

### Prevalence and Consequences



# *Illicit Drug Use in Nebraska – Summary of Key Findings*

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## ***Illicit Drug Use in Nebraska***

### *Marijuana is the most common illicit drug used in Nebraska*

- In 2015, about 1 in 8 Nebraska high school students (13.7 percent) reported past-month marijuana use.
- Nearly 1 in 15 (6.4 percent) adults 18 and older reported past-month use of marijuana in 2014-2015.
- In Nebraska, marijuana is common in drug-related crimes, accounting for nearly three-fourths of all drug possession arrests in 2015 and was the most common substance found in drivers who were caught driving under the influence of drugs from 2006-2016. In 2016, more than half of all new prison inmates in Nebraska reported using marijuana during the five years prior to their incarceration.

### *Cocaine use has dropped but is still used.*

- In 2015, about 1 in every 19 Nebraska high school students (5.3 percent) reported using cocaine sometime in their lifetime.
- During the combined years of 2014 and 2015, one and a half percent of adults, 18 and older, reported past-year cocaine use.
- In Nebraska, cocaine appears to be somewhat common in drug-related crimes and is a commonly used drug among newly incarcerated prison inmates (in 2015 one in seven of all new prison inmates in Nebraska reported using cocaine during the five years prior to their incarceration). It was the fourth most commonly reported illicit drug used during substance use treatment admissions in 2016.

### *Prescription drug abuse, including opioids, is a continuing problem.*

- In 2015, about 1 in every 7 Nebraska high school students (13.5 percent) reported using prescription drugs, which includes opioids, without a doctor's prescription sometime in their lifetime.
- During the combined years of 2013 and 2014, about 1 in 28 (3.6 percent) adults, 18 and older, reported non-medical use of pain relievers, which includes opioids, during the past year.

### *Heroin use is low but continues to be used in Nebraska.*

- In 2015, about 1 in 40 Nebraska high school students (2.5 percent) reported using heroin sometime in their lifetime.
- During the combined years of 2014 and 2015, 0.2 percent of residents 18 and older reported using heroin in the past year.

### *Methamphetamine use is common in incarcerated individuals and those in substance use treatment*

- In 2015, about 1 in every 23 Nebraska high school students (4.3 percent) reported using methamphetamine (meth) during their lifetime.
- From 2012 to 2014, 0.9 percent of residents 18 and older (0.9 percent) reported using methamphetamine in the past year.
- In Nebraska, meth appears to be relatively common in drug-related crimes and is the second most commonly used drug (after marijuana) among newly incarcerated prison inmates (in 2016, two out of every five new prison inmates in Nebraska reported using meth during the five years prior their incarceration). When examining the primary drugs of choice for those entering treatment, meth accounted for 19.7 percent of illicit drug substance use treatment admissions in 2016.

## ***Consequences of Illicit Drug Use in Nebraska***

### *Drug use is a contributor to death and medical care*

- Drug overdoses were directly responsible for the deaths of 121 Nebraska residents in 2015.
- In 2015, there were 1,549 hospitalizations in Nebraska in which a drug-attributable condition was listed as a primary or secondary reason for the hospitalization.

### *Drug use has significant economic costs for employers*

- In 2015, it is estimated that substance use costs Nebraska employers over \$390 million dollars in lost time, job training, re-training, plus health care costs.

### *Drug use places a tremendous strain on the criminal justice system*

- In 2015, there were 11,558 arrests for possession or sales of illicit drugs in Nebraska, making it the most common arrest offense.
- In 2016, 11.5 percent of all persons placed on probation were placed there for drug-related offenses. That percent has been rising since 2011, when 6.5 percent were placed on probation due to drug-related offenses.
- In 2016, 612 individuals were incarcerated for convictions in which a drug-related offense was the most serious offense committed.
- Drug-related offenses are the sixth most common reason for male incarceration and the most common reason for female incarceration.
- According to estimates from the Nebraska Department of Corrections, the expense to house and maintain these inmates is estimated to cost over \$21 million dollars annually.

### *Drug use is the second most common reason for removal of children from the home*

- In 2016, the reason for nearly half (43.9 percent) of the children removed from the home was, in part, due to parental substance use.

### *Treatment admissions for drug use are common*

- In 2016, there were 9,111 admissions to Nebraska substance use treatment centers (paid by through the Division of Behavioral Health) in which a non-alcoholic drug was listed at the primary drug of choice, accounting for 4 in 10 admissions (43.8 percent) with methamphetamine listed as the most common (19.7 percent).

## ***Demographic Differences***

### ***Differences by age***

- Nebraska residents age 18-25 were the most likely to use illicit drugs. Residents age 25-34 were more likely to receive substance use treatment, while residents age 35-54 were most likely to die as a direct result of drug use (Table 4.1).

**Table 4.1: Drug Indicators and Nebraska Residents**

<b>Indicator</b>	<b>Most Likely Age Group</b>
Marijuana use	18-25
Cocaine use	18-25
Non-medical pain reliever use	18-25
Trauma Centers drug-related admission	18-24
Drug-related poisoning deaths	35-54
Substance Use Treatment	25-34
Illicit Drug Dependence/Use	18-25

### ***Differences by gender***

- Among Nebraska high school students, there was no difference between males and females relating to drug use, regardless of drug type, in 2015.
- Males were more likely to be admitted into substance use treatment.

### ***Differences by urban/rural***

- Larger urban counties had higher age-adjusted mortality rates for drug-related deaths than more rural counties.

### ***Differences by race/ethnicity***

- These findings were not available for this report.

## *Illicit Drug Consumption: Patterns and Concerns*

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Nebraska, like the rest of the U.S., has rates of use for illicit drugs much lower than those for alcohol and tobacco. The sole exception to this is marijuana, which has a much higher prevalence of use than tobacco, particularly for youth. Youth marijuana usage rates are comparable to cigarette use in many states. In fact, at some ages, youth marijuana use is higher than tobacco use.

Nebraska's illicit drug use is generally lower than the use rate among the same age peers in the U.S. There are some exceptions, such as marijuana use, which is growing among youth and adults as perceptions of harm continue to fall.

In the current Nebraska Epidemiological Profile, illicit drug use consumption data, along with mortality and morbidity data, is presented with specific information for different illicit substances.

Drug names and categories can be quite confusing. To provide clarity on some of the commonly used drugs, Appendix B includes a summary of drug categories, including specific drugs and their effects on the body.

## Adult Illicit Drug Consumption

Most drug use information for Nebraska comes from the National Survey on Drug Use and Health (NSDUH). This national survey provides state-level estimates for illegal drug use but it does not provide county-level estimates. In this section, five types of adult illicit drug use consumption data from NSDUH are shown: 1) marijuana use, 2) cocaine use, 3) non-medical prescription drug use, 4) methamphetamine use, and 5) heroin use.

### *Adult Illicit Drug Consumption: Marijuana Use*

As noted in the *Consequences of Illicit Drug Use* section of this report, marijuana is common in drug-related crimes, accounting for nearly three-fourths of all drug arrests in 2015. Marijuana was the most common substance found in drivers who were caught driving under the influence of drugs in every year from 2006 to 2016. In 2016, more than half of all new prison inmates in Nebraska reported using marijuana sometime during the five years prior to their incarceration.

#### *Past month Marijuana Use Indicator Summary*

Indicator	Data Source	Year	Nebraska	Estimated Persons	Nation	Nebraska vs. Nation	Trend
Marijuana use in past month among persons 18 and older	NSDUH	2014/2015	6.4%	90,000	8.5%	Lower	Stable

#### *Current Marijuana Use in Nebraska*

In 2014-15, approximately 1 in every 15 Nebraska adults (6.4 percent), an estimated 90,000 people, reported using marijuana during the 30 days preceding the survey.

#### *Compared to the Nation*

In 2014-2015, adults in Nebraska reported less marijuana use than adults nationally, 6.4 percent and 8.5 percent, respectively.

#### *Trends*

Since 2008-2009, there has been no significant change in marijuana use during the past month in Nebraska. In 2008-2009, 5.3 percent of adults reported using marijuana and in 2014-2015, 6.4 percent reported marijuana use in the past month.

### *Adult Illicit Drug Consumption: Marijuana Use by Age*

Overall, 18-25 year olds (16.8 percent) are more likely to use marijuana than those who are ages 26 and older (4.5 percent).

- In Nebraska, 18-25 year olds are less likely than the U.S. average to use marijuana in the past month, with 16.8 percent of Nebraska residents ages 18-25 reporting past month use of marijuana. Nationally, 19.7 percent of U.S. residents reported past month use of marijuana but the difference is not statistically significant.

- For those ages 26 and older in the U.S., as a whole, there is a slight increase in the percent who use marijuana, but in Nebraska the rate is stable. In Nebraska, 4.5 percent of adults ages 26 and older report using marijuana in the past month, while 6.6 percent of U.S. residents as a whole reported using marijuana in the past month. This shows that starting in 2012-13 Nebraska adults ages 26 and older are significantly less likely than adults the same age nationally to use marijuana in the past month.

### ***Adult Illicit Drug Consumption: Cocaine Use Past Year***

As noted in the *Consequences of Illicit Drug Use* section of this report, cocaine (although not always reported independent of other drugs) appears to be somewhat common in drug-related crimes in Nebraska and is a commonly used drug among newly incarcerated prison inmates (in 2016, one in seven new inmates in Nebraska reported using cocaine during the 5 years prior to their incarceration).

#### ***Past-year cocaine use indicator summary***

Indicator	Data Source	Year	Nebraska	Estimated Persons	Nation	Nebraska vs. Nation	Trend
Cocaine use in past year among persons 18 and older	NSDUH	2014/2015	1.5%	21,000	1.9%	Non-significant	Stable

#### ***Past-year cocaine use in Nebraska***

In 2014-15, approximately 1 in every 66 Nebraska adults (1.5 percent) or an estimated 21,000 adults, reported using cocaine during the past year.

#### ***Compared to the nation***

In 2014-15, the number of adults in Nebraska was similar to numbers nationally for cocaine use in the past year, 1.5 percent and 1.9 percent, respectively.

#### ***Trends***

Since 2008-09, there has been no significant change in cocaine use in Nebraska. In 2008-09, 1.6 percent of adults reported using cocaine in the past year and in 2014-15, 1.5 percent reported cocaine use in the past year.

### ***Adult Illicit Drug Consumption: Cocaine Use by Age***

Overall, 18-25 year olds (4.0 percent) are more likely to use cocaine than those 26 and older (1.0 percent).

- In Nebraska, 4.0 percent of 18-25 year olds report using cocaine in the past year compared to 5.0 percent of U.S. residents as a whole for 2014-15.
- For adults 26 and older, 1.0 percent of Nebraskans report using cocaine in the past year, while 1.4 percent of U.S. adults similarly report using it in the past year. In both age groups there is not, however, a significant difference between Nebraska's rate and the U.S. rate.



## ***Past-Year Non-Medical Use of Pain Relievers***

Abuse of pain relievers, including opioid pain medications, continues to be a problem for Nebraska along with the nation as a whole. As noted in the *Consequences of Illicit Drug Use* section of this report, non-medical use of pain relievers appears to be relatively common in drug-related crimes in Nebraska and there is some reported use among newly incarcerated prison inmates (in 2016, one in 12 inmates of all new prison inmates in Nebraska reported using prescription pain relievers non-medically during the five years prior to their incarceration).

### ***Past year non-medical use of pain relievers indicator summary***

Indicator	Data Source	Year	Nebraska	Estimated Persons	Nation	Nebraska vs. Nation	Trend
Non-medical use of pain relievers in past year among persons 18 and older	NSDUH	2013/2014*	3.6%	49,000	4.0%	Non-significant	Stable

\*Note: Due to changes in NSDUH this is the most recent data available

### ***Past-year non-medical use of pain relievers in Nebraska***

In 2013-14, approximately 1 in every 28 Nebraska adults (3.6 percent), an estimated 49,000 adults, reported using pain relievers for non-medical use during the past year.

### ***Compared to the nation***

In 2013-14, adults in Nebraska ranked similar to adults nationally in use of pain relievers for non-medical use in the past year, 3.6 percent and 4.0 percent, respectively.

### ***Trends***

Since 2008-09, there has been no significant change in non-medical prescription pain reliever use in Nebraska. In 2008-09, 3.3 percent of adults reported using prescription pain relievers non-medically in the past year and in 2013-14 3.6 percent reported using prescription pain relievers non-medically in the past year.

## ***Adult Illicit Drug Consumption: Prescription Drug Abuse by Age***

Similar to other drug consumption, 18-25 year olds (8.0 percent) are more likely to use pain relievers non-medically than those ages 26 and older (2.8 percent).

- In Nebraska, 8.0 percent of 18-25 year olds report using pain relievers non-medically in the past year compared to 8.3 percent of U.S. residents as a whole for 2013-14.
- For adults 26 and older, 2.8 percent of Nebraskan report using pain relievers non-medically in the past year while 3.3 percent of U.S. adults similarly report using it in the past year. In both age groups there is not, however, a significant difference between Nebraska's rate and the U.S. rate.

### ***Adult Illicit Drug Consumption: Past-Year Methamphetamine Use***

As noted in the *Consequences of Illicit Drug Use* section of this report, methamphetamine (although not always reported independent of other drugs) appears to be relatively common in drug-related crimes in Nebraska and is the second most commonly used drug (after marijuana) among newly incarcerated prison inmates. In 2016, 40.9 percent of all new prison inmates in Nebraska reported using methamphetamine during the five years prior their incarceration. When examining the primary drugs of choice, methamphetamine was the second most commonly reported drug (behind alcohol) during substance use treatment admissions in 2016 (20.4 percent). (Note: Due to limited data availability, it was necessary to run data in three year rolling averages rather than two-year rolling averages).

#### ***Past-year methamphetamine use indicator summary***

Indicator	Data Source	Year	Nebraska	Estimated Persons	Nation	Nebraska vs. Nation	Trend
Methamphetamine use in past year among persons 18 and older	NSDUH	2012-2014	0.9%	13,000	NA	NA	Stable

#### ***Past-year methamphetamine use in Nebraska***

From 2012-14, approximately 1 in every 100 Nebraska adults (0.9 percent), an estimated 13,000, reported using methamphetamine during the past year.

#### ***Compared to the Nation***

National data were not available for this time period.

#### ***Trends***

From 2006-08 until 2012-14, there has been no significant change in methamphetamine use in Nebraska. From 2006 through 2008, 1.3 percent of adults reported using methamphetamine in the past year and from 2012 through 2014, just 0.9 percent reported using methamphetamine in the past year.

### ***Adult Illicit Drug Consumption: Past-Year Methamphetamine Use by Age***

Similar to other drug consumption, 18-25 year olds are more likely to use methamphetamines than those 26 and older.

- In 2012-14, 2.2 percent of Nebraskan's ages 18-25 reported using methamphetamines while 0.6 percent of Nebraskans ages 26 and older reported using methamphetamines. No national comparisons were available.

### ***Adult Illicit Drug Consumption: Past Year Heroin Use***

As noted in the *Consequences of Illicit Drug Use* section of this report, heroin appears to be relatively rare but still used in drug-related crimes in Nebraska. In 2016, 1 in 42 new prison inmates in Nebraska reported using heroin during the five years prior their incarceration.

#### *Lifetime heroin use indicator summary*

Indicator	Data Source	Year	Nebraska	Estimated Persons	Nation	Nebraska vs. Nation	Trend
Heroin use in past year among persons 18 and older	NSDUH	2014/2015	0.2%	3,000	0.4%	Non-significant	NA

#### *Lifetime heroin use in Nebraska*

From 2014-15, approximately 1 in every 500 Nebraska residents 18 and older (0.2 percent), an estimated 3,000 residents, reported using heroin sometime in the past year.

#### *Compared to the nation*

From 2014-2015, the number of residents in Nebraska were similar to national numbers for heroin use in the past year, 0.2 percent and 0.4 percent, respectively. There was no significant difference between Nebraska and the U.S.

#### *Trends*

As this is a new measure there is no current trend data.

### ***Adult Illicit Drug Consumption: Used Heroin in Past Year by Age***

Similar to other drug consumption, 18-25 year olds (0.6 percent) are more likely to use heroin than those ages 26 and older (0.2 percent).

- In Nebraska, 0.6 percent of 18-25 year olds report using heroin in the past year compared to 0.7 percent of U.S. residents as a whole for 2014-15.
- For adults 26 and older, 0.2 percent of Nebraskans report using heroin in the past year while 0.3 percent of U.S. adults similarly report using it in the past year. In both age groups there is not, however, a significant difference between Nebraska's rate and the U.S. rate.

# Youth Illicit Drug Use in Nebraska

## Overview

Illicit drug consumption data is gathered through the Youth Risk Behavior Survey (YRBS) in Nebraska. The YRBS is conducted every other year in a sample of high schools throughout Nebraska. It measures students' use of several illicit drugs in their lifetime and is broken down by grade and gender.

### ***Youth Illicit Drug Consumption: Past-Month Marijuana Use***

The YRBS asked high school students if they have used marijuana in the past 30 days.

#### *Past-month marijuana use indicator summary*

Indicator	Data Source	Year	Nebraska	Estimated Persons	Nation	Nebraska vs. Nation	Trend
Marijuana use in past month among youth grades 9-12	YRBS	2015	13.7%	14,000	21.7%	Lower	Stable

#### *Current marijuana use in Nebraska*

In 2015, approximately 1 in every 7 Nebraska high school students (14 percent), an estimated 14,000 youth, reported using marijuana during the 30 days preceding the survey.

#### *Compared to the nation*

In 2015, numbers of youth in Nebraska using marijuana were lower than youth nationally -- 13.7 percent and 21.7 percent, respectively.

#### *Trends*

In 2015, 13.7 percent report using marijuana in the past 30 days compared to 17.5 percent in 2005, but the difference is not significant.

### ***Youth Illicit Drug Consumption: Past-Month Marijuana Use by Demographics***

#### *Differences by grade*

Overall the rates are very similar by grade except that 9<sup>th</sup> graders use rates are significantly lower than other grades (5.0 percent) followed by a significant increase in 10<sup>th</sup> grade (15.8 percent) in current use.

#### *Differences by gender*

Males are slightly less likely (12.7 percent) to indicate past month use of marijuana than females (14.4 percent) but the difference is not statistically significant.

### ***Youth Illicit Drug Consumption: Early Initial Marijuana Use among Youth***

The YRBS also asked high school students if they have used marijuana before the age of 13.

#### ***Early initial marijuana use indicator summary***

Indicator	Data Source	Year	Nebraska	Estimated Persons	Nation	Nebraska vs. Nation	Trend
Early initial marijuana use among youth grades 9-12	YRBS	2015	6.3%	6,000	7.5%	Non-Significant	Stable

#### ***Early initial marijuana use in Nebraska***

In 2015, approximately 1 in every 15 Nebraska high school students (6 percent), an estimated 6,000 youth, reported using marijuana before the age of 13.

#### ***Compared to the nation***

In 2015, fewer youth in Nebraska used marijuana before age 13 than youth nationally, (6.3 percent and 7.5 percent, respectively) but the difference was not statistically significant.

#### ***Trends***

In 2015, 6.3 percent report using marijuana before age 13, compared to 7.0 percent in 2005, but the difference is not significant.

### ***Youth Illicit Drug Consumption: Early Initial Marijuana Use among Youth by Demographics***

#### ***Differences by grade***

Overall, the rates are very similar by grade with no significant statistical difference.

#### ***Differences by gender***

Males are more likely (7.0 percent) to indicate using marijuana before age 13 than females (5.6 percent) but the difference was not significant.

### ***Youth Illicit Drug Consumption: Lifetime Illicit Drug Use Among Youth***

The YRBS asked high school students in 2015 if they have ever used certain illicit drugs. Marijuana was the most commonly reported drug, with 1 in 4 (26.6 percent) indicating they had used it sometime in their lifetime. Second was use of prescription drugs without a doctor's prescription (13.5 percent), followed by inhalants (8.1 percent), synthetic marijuana (7.5 percent), cocaine (5.3 percent), ecstasy (5.1 percent), methamphetamine (4.3 percent) steroids without a doctor's prescription (3.5 percent), and heroin (2.5 percent).

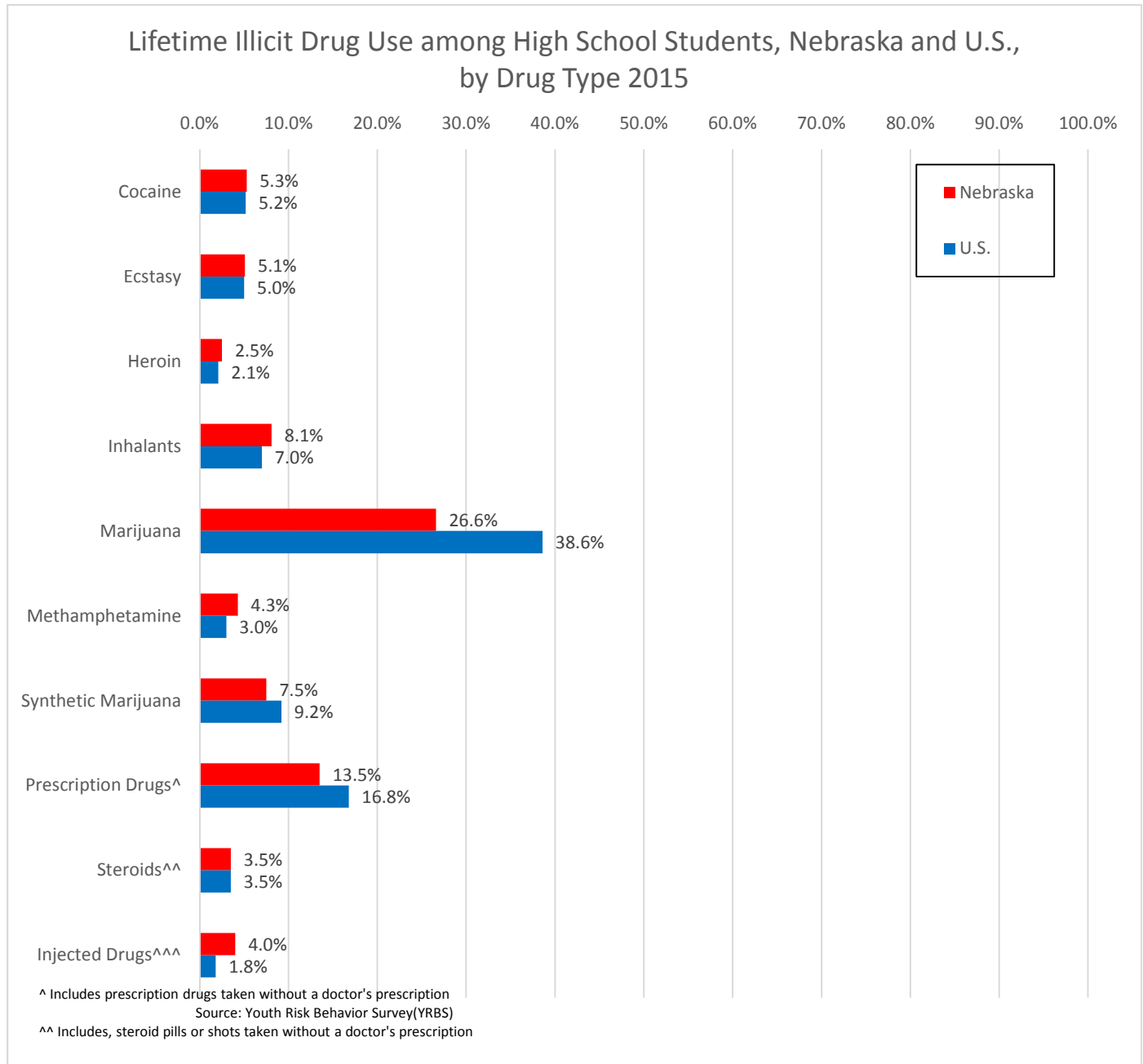
Table 4.2: Percentage of students in grades 9-12 and by gender, who have used illicit drugs in their lifetime, Nebraska (2015)

	Lifetime Use				Gender	
Illicit Drug	9 <sup>th</sup>	10 <sup>th</sup>	11 <sup>th</sup>	12 <sup>th</sup>	Female	Male
Marijuana	10.6%	28.7%	28.9%	37.4%	27.6%	25.2%
Cocaine	1.6%	4.7%	7.6%	6.6%	5.2%	5.2%
Inhalants	4.1%	10.4%	9.7%	7.6%	9.3%	6.8%
Ecstasy	0.8%	5.2%	5.5%	8.6%	5.0%	5.2%
Heroin	0.3%	1.2%	4.5%	3.6%	1.9%	2.8%
Methamphetamines	0.6%	1.9%	7.6%	6.3%	3.8%	4.1%
Synthetic Marijuana	2.6%	6.1%	9.0%	11.2%	7.6%	6.9%
Steroids^	1.3%	3.4%	4.8%	4.0%	3.4%	3.3%
Prescription drugs^	5.2%	13.1%	15.3%	19.5%	14.9%	11.9%
Injected any illegal drug	1.6%	2.0%	5.3%	6.1%	3.1%	4.5%

^Without a doctor's prescription  
Source: YRBS

Compared nationally, Nebraska students reported a significantly lower lifetime use of marijuana and non-medical prescription drug use, including opioids, (Figure 4.1). Use of injected drugs was significantly higher for Nebraska than the U.S. as a whole.

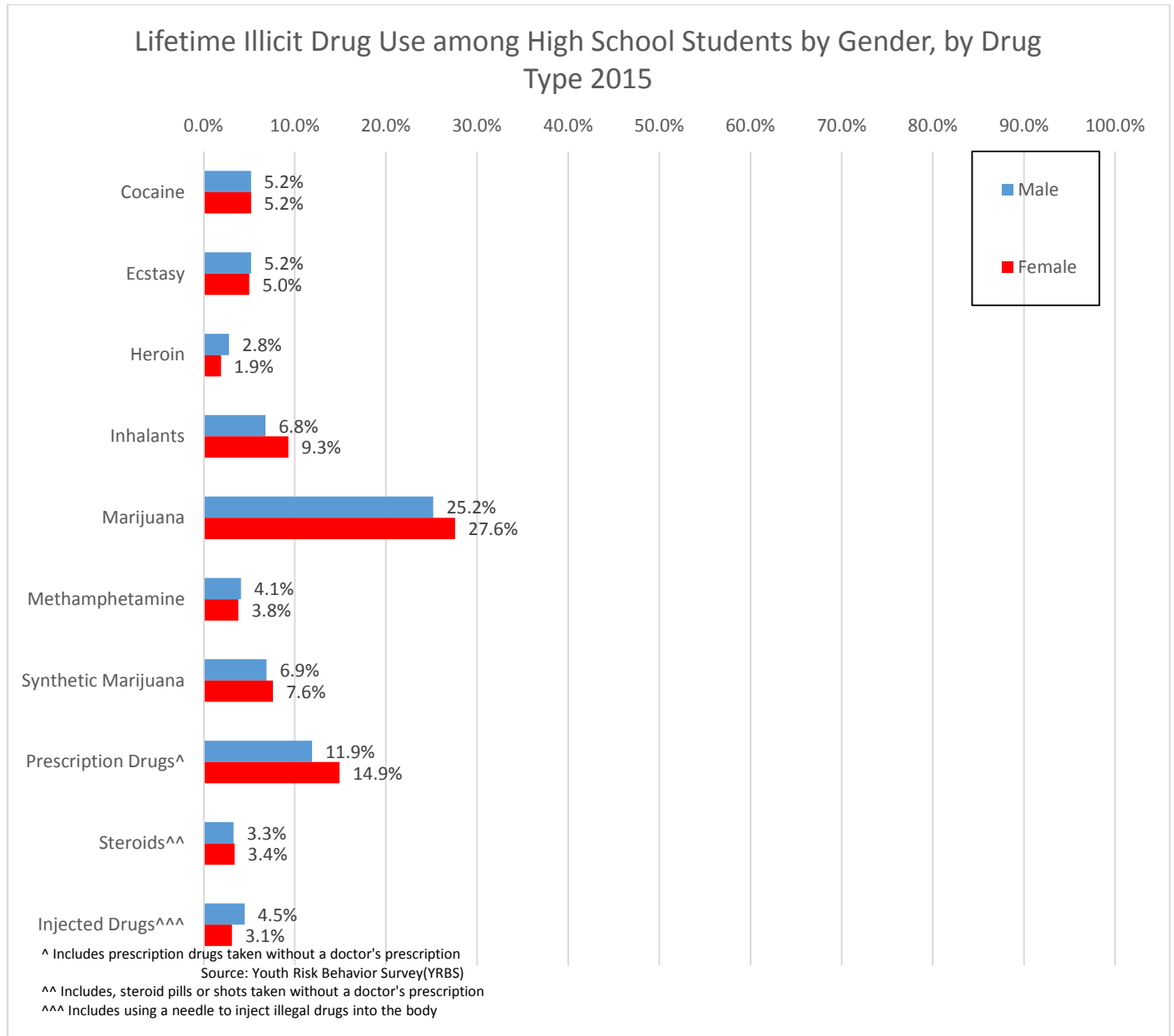
Figure 4.1: Lifetime illicit drug use among high school students, Nebraska and U.S., by drug type 2015



## Youth Illicit Drug Consumption: Lifetime Illicit Drug Use among Youth by Gender

In 2015, there was no significant difference between males and females for lifetime use of any illicit drug (Figure 4.2).

Figure 4.2: Lifetime illicit drug use among high school students by gender, by drug type 2015





### ***Youth Illicit Drug Consumption: Were Offered, Sold or Given an Illegal Drug on School Property in Last Year***

The YRBS asked high school students if they were offered, sold, or given an illegal drug while on school property over the last 12 months. Overall, 1 in 5 youth (19.9 percent) reported being offered, sold or given illegal drugs on school property in Nebraska. The U.S. had a similar rate of youth who were offered, sold, or give an illegal drug while on school property (21.7 percent).

#### ***Offered, sold or given illegal drugs at school indicator summary***

Indicator	Data Source	Year	Nebraska	Estimated Persons	Nation	Nebraska vs. Nation	Trend
Were offered, given or sold illegal drugs on school property among youth, grades 9-12	YRBS	2015	19.9%	20,000	21.7%	Non-significant	Stable

#### ***Offered, sold or given illegal drugs at school in Nebraska***

In 2015, approximately 1 in every 5 Nebraska high school students (19.9 percent), an estimated 20,000 youth, reported being offered, sold, or given illegal drugs on school property.

#### ***Compared to the nation***

In 2015, numbers of youth in Nebraska were similar to youth nationally that were offered, sold, or given illegal drugs on school property, 19.9 percent and 21.7 percent, respectively.

#### ***Trends***

In 2015, 19.9 percent reported being offered, sold, or given an illegal drug while on school property compared to 22.0 percent in 2005, but the difference is not statically significant.

### ***Youth Illicit Drug Consumption: Were Offered, Sold, or Given an Illegal Drug on School Property in Last Year by Demographics***

#### ***Differences by grade***

Overall, the rates are very similar by grade. Ninth-grade students has slightly lower rates than older students but the difference was not statistically significant.

#### ***Differences by gender***

Males are less likely (19.1 percent) to indicate having been offered, sold, or given an illegal drug on school property than females in 2015 (20.8 percent) but the difference was not statistically significant.

# Illicit Drug Consequences: Introduction

## Overview

Illicit drug consumption is associated with a variety of negative consequences that affect the individual, family and society. In this section of the Epidemiological Profile, data related to the consequences of illicit drug use are presented. First drug related mortality will be reviewed. In addition, the report will look at drug-related hospitalizations, legal consequences, drug dependence, and drug treatment. While these do not provide the whole story of drug use in Nebraska, it does provide insight regarding the toll that illegal drug use puts on the state and its citizens.

## *Illicit Drug-Related Mortality and Morbidity: Drug Type and Drug Deaths*

Each year in Nebraska, a large number of the drug-attributable deaths are coded as deaths due to unspecified drugs on the death certificate. As a result, comparing deaths by drug type may not be accurate. For this report, drug-attributable deaths in Nebraska were reported collectively and not by specific drug type.

## *Illicit Drug-Related Mortality and Morbidity: Drug Related Overdosing Deaths*

Similar to alcohol use, death due to drug use has multiple dimensions. Drug use can be the direct cause of death (e.g., suicide by drug overdose) or a contributing factor to death (e.g., contracting hepatitis B through sharing needles). For causes of death in which drugs are not the direct cause of death, but rather contributing factors, drug-attributable fractions (DAFs) can be applied to death certificate data to generate estimates of the number of drug-related deaths. Estimates of the number of drug-related deaths presented in this report were calculated using DAFs provided by the Pacific Institute for Research and Evaluation. However, it should be noted that DAFs are less advanced than alcohol-attributable fractions, and likely under-estimate the actual number of drug-related deaths. As a result, the primary focus of this report will be on deaths that were directly attributable to drug overdoses or poisoning.

### *Drug-related overdose death indicator*

(Note: see methods section of this report for the death codes used in this report)

- Drug-attributable overdose deaths per 100,000 population (age-adjusted) represent the number of deaths directly attributable to drug overdoses.

### *Drug-related death indicator summary*

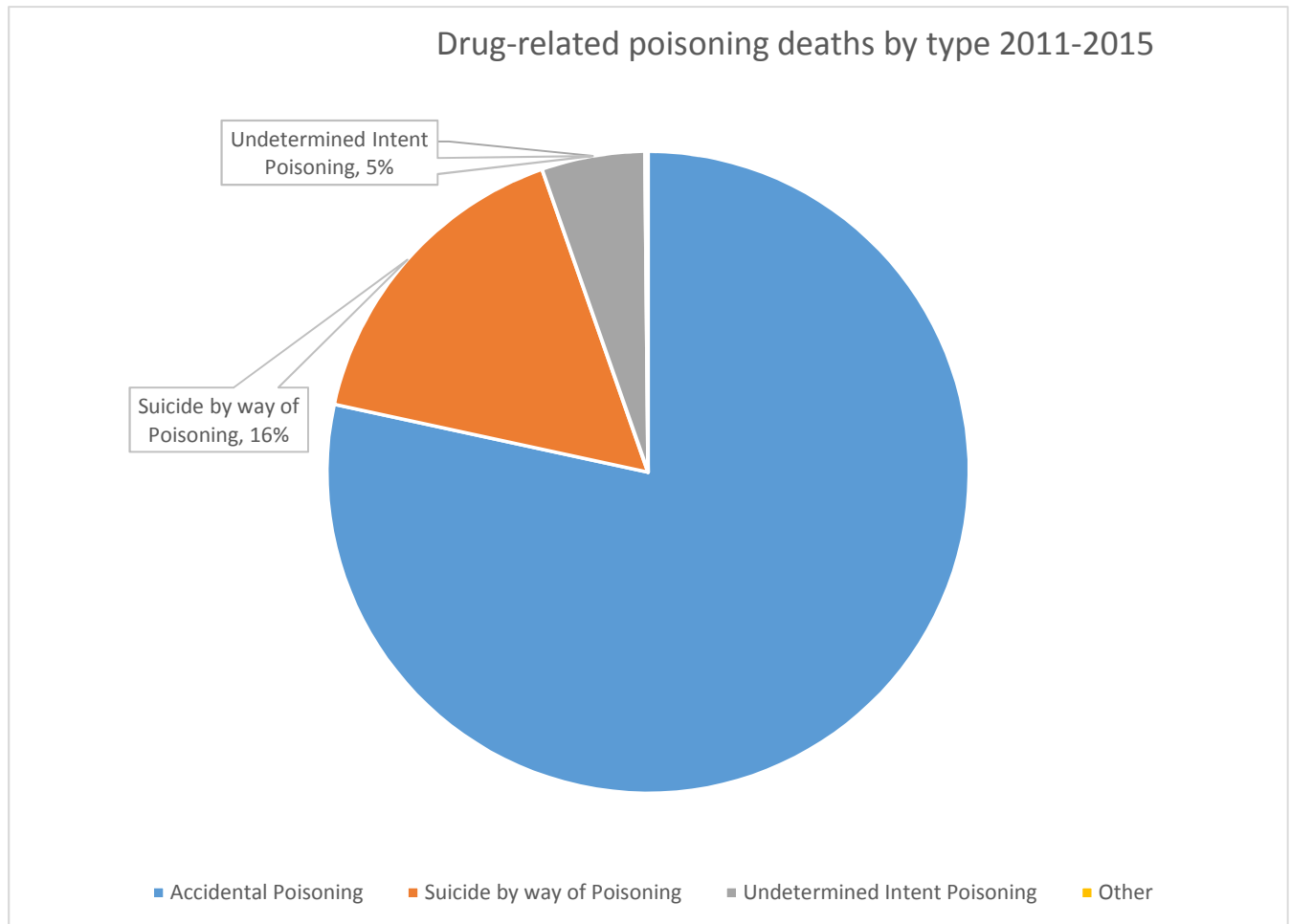
Indicator	Data Source	Year	Nebraska AA Rate*	Number of deaths	Nation AA Rate*	Nebraska vs. Nation	Trend
Drug-overdose deaths	NE Vital Records^	2015	6.7	121	16.3	Lower	Increasing (2005-2015)

\*Age-adjusted death rate per 100,000 population (2000 U.S. standard)

^Nebraska data were obtained from the Nebraska Vital Records, U.S. data were obtained through CDC Wonder (on-line)

In 2015, there were 121 drug-overdose deaths in Nebraska for a rate (age-adjusted) of 6.7 deaths per 100,000 population. Most (54 percent) of the deaths were from unspecified drugs making it difficult to determine exactly what drugs are causing mortality. Between 2011 and 2015, there were 634 deaths in Nebraska of which most (79 percent) came from accidental drug poisoning (Figure 4.3).

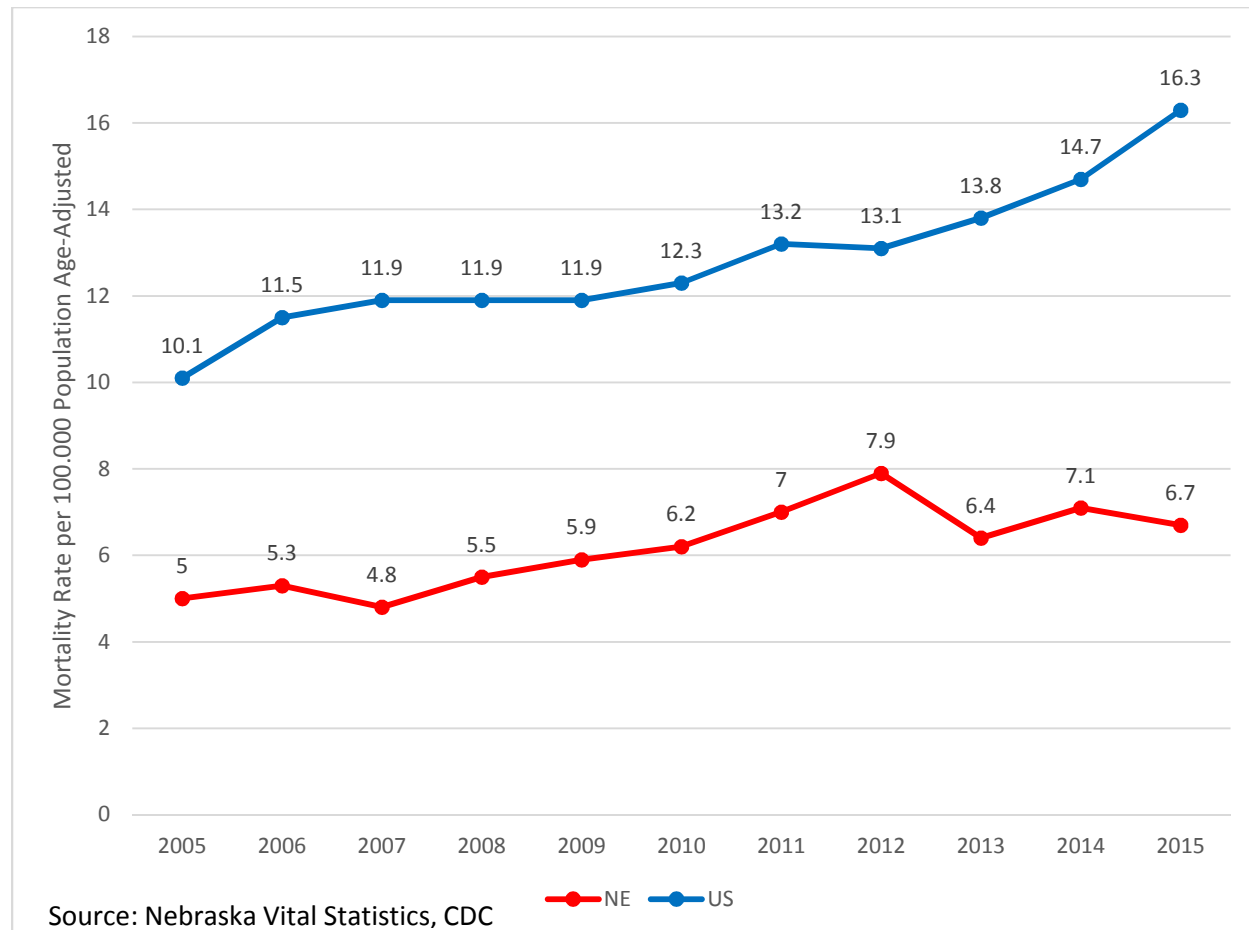
Figure 4.3: Drug-related poisoning deaths by type 2011-2015



### Trends

Between 2005 and 2015, the drug-overdose death rate has increased slightly from 5.0 in 2005 to 6.7 in 2015. The U.S. rate as a whole has typically been twice what the Nebraska rate has been except in 2015 when it was even higher (Figure 4.4).

Figure 4.4: Rate of drug poisoning deaths, Nebraska vs U.S. (2005-2015)

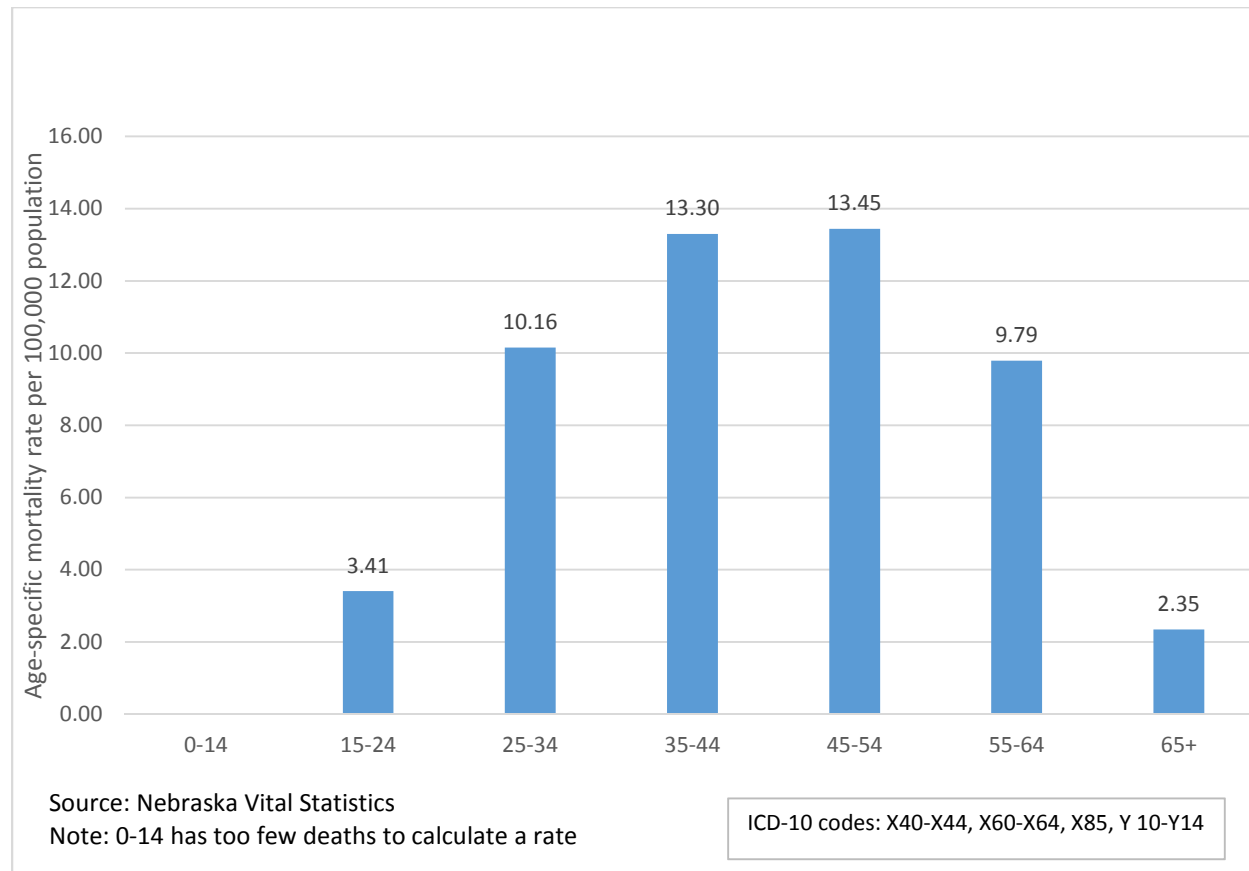


### ***Illicit Drug-Related Mortality and Morbidity: Drug-Related Deaths by Demographics***

#### ***Differences by age***

Figure 4.5 shows the age-specific rate of drug-overdose deaths in Nebraska by age group from 2011 to 2015. The age group with the highest rate of drug-overdose deaths is 45 to 54 year olds followed by 35 to 44 year olds. Nebraskans at the younger and older end of the spectrum tended to have lower rates of drug-overdose deaths while those in the middle had the highest rates.

Figure 4.5: Rate of drug-poisoning deaths in Nebraska, by age group, (2011-2015)



#### *Differences by gender*

Between 2011 and 2015, females and males have virtually the same rate of drug overdose mortality (7.1 and 6.9) respectively.

#### *Differences by urban/rural*

Between 2011 and 2015, there was a substantial difference between urban and rural counties in Nebraska. Large, urban counties had higher age-adjusted mortality rates (7.9) than either small urban (5.5) or rural counties (5.9).

#### *Differences by race/ethnicity*

Between 2011 and 2015, there were 573 drug-poisoning deaths among whites, 37 among African-Americans, 1 death among Asians, and 14 deaths among Native Americans. When comparing drug-attributable deaths by ethnicity, 19 deaths occurred among Hispanics compared to 615 among non-Hispanics. Due to the small number of drug-attributable deaths among racial and ethnic minorities in Nebraska during this time period, death rates were not reported.

## Illicit Drug-Related Mortality and Morbidity: Drug-Related Hospitalizations

The Nebraska Hospital Discharge Database and the Nebraska Trauma Registry Database are two data sources in Nebraska that contain information on hospital care. For this report, Nebraska hospital discharge data were limited to information on inpatient care received at acute care hospitals in Nebraska while trauma registry data were limited to inpatient care received through seven trauma centers within Nebraska that were reporting data into the Nebraska Trauma Registry (NTR) at the time of the report.

### *Illicit Drug-Related Mortality and Morbidity: Inpatient Drug-Attributable Hospitalizations*

**Data Source: Nebraska Hospital Discharge Data**

In 2015, there were 1,516 inpatient hospitalizations in Nebraska, in which a drug-attributable condition was listed as either the primary or a secondary reason for the hospitalization (Table 4.3). In addition to the 1,516 hospitalizations in which drugs were a direct contributor, it is likely that drug use indirectly contributed to a much larger number of hospitalizations. For example, drug use can contribute to hospitalizations indirectly through altering judgment that may lead to injury or through chronic conditions (such as hepatitis or HIV/AIDS) that were contracted through sharing needles.

Table 4.3: Drug-attributable hospitalizations in Nebraska by age and gender (2014)

	Number	Percent
<b>Total</b>	1,516	
<b>Gender</b>		
Male	732	48.3%
Female	784	51.7%
<b>Age</b>		
1-17	166	10.9%
18-44	852	56.2%
45-64	408	26.9%
65-84	77	5.1%
85+	13	0.9%

\*Includes hospitalizations in which a drug-attributable code was listed as either the primary cause of or a secondary cause to the hospitalization

Source: Nebraska Hospital Discharge Data

### *Inpatient Illicit-Drug Hospitalizations by Demographics*

#### *Differences by age*

In 2014, over half of the inpatient hospitalizations occurred for those between the ages 18-44. In addition, those ages 45-64 made up one-fourth of the hospitalizations.

### *Differences by gender*

In 2014, there were nearly an equal number of hospitalizations for males as females. There were 732 hospitalizations for males and 784 hospitalizations for females.

### *Differences by urban/rural*

In 2014, as would be expected, the majority of hospitalizations came from urban large counties (1,044). The smallest number, 184, came from rural counties while urban small counties had 288 hospitalizations.

### ***Illicit Drug-Related Mortality and Morbidity: Trauma Center Hospitalizations***

**Data Source: Nebraska Trauma Registry**

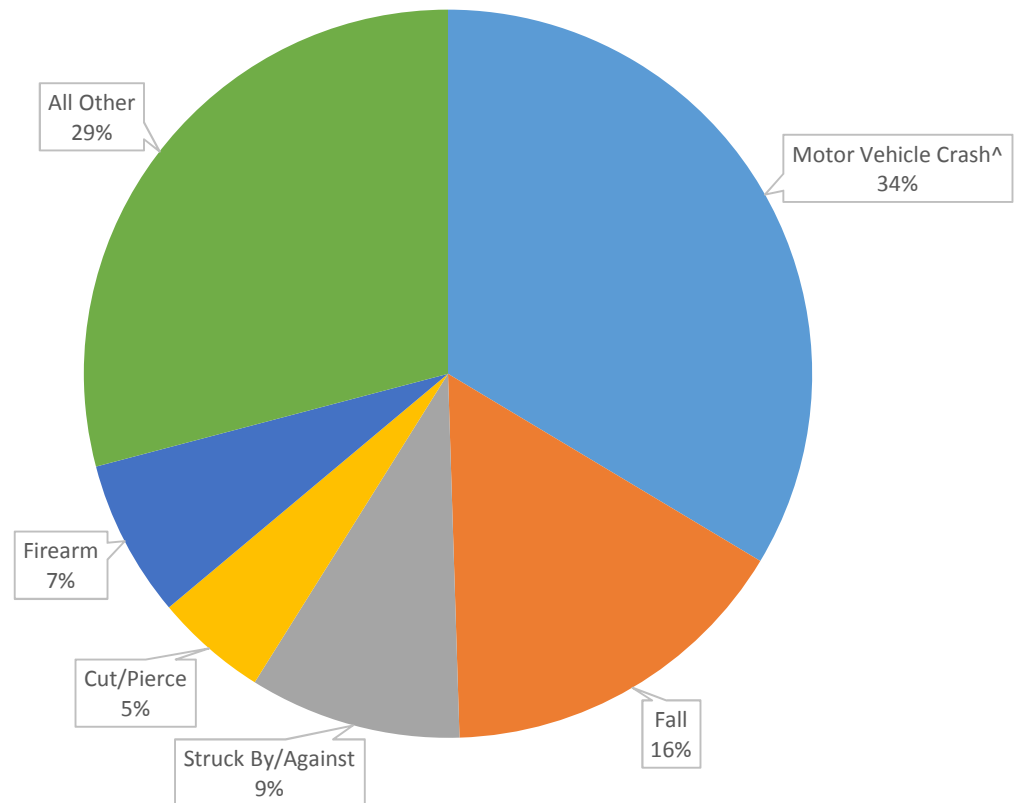
In contrast to hospital discharge data, patients receiving care through Nebraska trauma centers are tested (at the discretion of each center) for alcohol and drugs at the time of admission. As a result, data are available on marijuana, cocaine, and amphetamine/methamphetamine use across the seven participating centers. It should be noted that amphetamines and methamphetamine could not be separated from one another because centers collect and report the information differently. Also, it is possible that some amphetamine use may be prescribed so it would not be considered as recreational use. In addition, due to inconsistencies in reporting test results across centers, other drugs that are commonly prescribed or administered through the emergency department (e.g., opiates, benzodiazepines) were excluded from analysis, even though some patients may have used them non-medically. Finally, some cases had multiple drug positive results. All positive results were counted.

### ***Drug Involvement in Trauma Center Hospitalizations***

In 2015, the seven participating trauma centers experienced 10,199 inpatient hospitalizations, of which 757 (7.4 percent) were among patients who had marijuana, cocaine, amphetamines, benzodiazepines or methamphetamine in their system at the time of admission. It is possible that there were a larger number of hospitalizations in which patients had these drugs in their system but may not have been tested as a result of failing to show visible signs of impairment at the time of admission.

Among hospitalizations in which the patient had one or more of these drugs in their system at the time of admission, motor vehicle crashes accounted for over one-third of all hospitalizations (33.6 percent) followed by falls (15.9 percent), struck by or against an object (9.4 percent), and firearms (seven percent) with other causes accounting for 34.1 percent of hospitalizations (Figure 4.6).

Figure 4.6: Among trauma center hospitalizations in which the patient had Illegal drugs in their system at the time of admission, percentage by type of injury, 2015



^Includes all motorized vehicle crashes occurring on public and private property  
Note: Includes inpatient hospitalizations through seven Nebraska trauma centers  
Source: Nebraska Trauma Registry

\*Includes all motorized vehicle crashes occurring on public and private property  
Note: Includes inpatient hospitalizations at seven Nebraska Trauma Centers  
Source: Nebraska Trauma Registry



When comparing hospitalizations by demographic subgroup, males were more likely than females to have had these drugs in their system at the time of admission (9.5 percent and 4.8 percent, respectively) while patients ages 18-24 (19 percent), and ages 25-34 (18.2 percent) were the most likely age groups (Table 4.4).

Table 4.4: Total number of hospitalizations with any illicit drugs, by gender and age

Demographic	Total # of hospitalizations	Number and percent of all hospitalizations with any illicit drugs	
		Number	Percent
<b>Total</b>	10,199	757	7.42%
<b>Gender</b>			
Male	5,758	545	9.47%
Female	4,421	211	4.77%
<b>Age</b>			
<18	1,500	41	2.73%
18-24	1,004	191	19.02%
25-34	1,022	186	18.20%
35-44	826	125	15.13%
45-64	2,179	193	8.86%
65+	3,608	21	0.58%

Includes only positive test results for marijuana, cocaine, amphetamines and methamphetamine

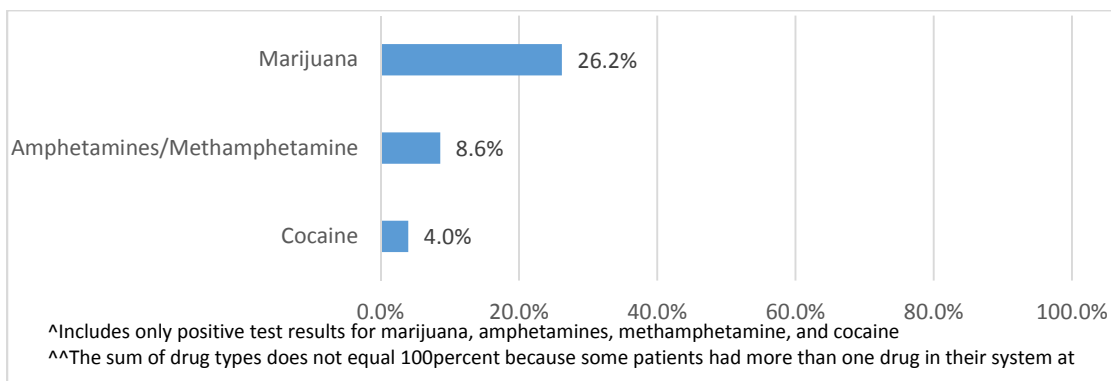
Note 1: Amphetamines and methamphetamine could not be separated, amphetamines may include prescription use

Note 2: Includes inpatient hospitalizations through seven Nebraska trauma centers

Source: Nebraska Trauma Registry

Among hospitalizations in which the patient had these drugs in their system at the time of admission, marijuana was the most common, found in 198 of 757 patients (26.2 percent) followed by amphetamines/methamphetamine (65 patients, 8.6 percent) and cocaine (30 patients, 4.0 percent) (Figure 4.7).

Figure 4.7: Among trauma center hospitals in which patient had illicit drugs<sup>^</sup> in their system at the time of admission, percentage by drug type<sup>^^</sup>, 2015



## Economic Costs of Illicit Drugs in the Workplace

Illicit drug use has significant economic costs for employers across the state. Table 4.5 presents the costs of substance abuse in Nebraska by industry type. It also lists the prevalence of substance use by type of industry.

The industries with the highest prevalence of substance abuse are construction and entertainment, recreation, and food. The cost to these industries together is over \$63 million.

**Table 4.5: Estimated employer costs of substance abuse in Nebraska (2015)**

Industry	Prevalence of Substance Use Disorder	Total Number of Employees in Industry	Lost Time	Job Turnover & Re-training	Healthcare	Total Cost
Agricultural, Forestry and Fishing	Moderate	55,411	\$1,082,385	\$2,757,120	\$5,637,276	\$9,482,166
Mining	Moderate	1,112	\$143,835	\$326,757	\$121,236	\$594,408
Construction	Highest	49,713	\$9,167,488	\$7,389,602	\$6,423,634	\$22,980,724
Manufacturing	Average or Below	97,465	\$13,968,245	\$15,301,995	\$9,734,168	\$39,020,538
Wholesalers	Average or Below	42,831	\$6,197,705	\$6,585,960	\$4,282,414	\$17,068,084
Retail	Moderate	109,523	\$15,852,603	\$16,895,697	\$11,706,720	\$44,467,149
Transportation & Utilities	Average or Below	61,551	\$2,023,808	\$7,370,208	\$5,970,952	\$15,370,184
Information & Communications	Moderate	17,502	\$7,382,382	\$7,804,342	\$1,863,056	\$17,049,780
Finance, Insurance & Real Estate	Moderate	72,962	\$8,778,510	\$9,941,475	\$7,579,518	\$26,299,503
Professional, Technical & Management	Moderate	66,226	\$20,325,996	\$9,727,496	\$7,220,936	\$37,274,428
Administration, Support & Waste Management	Moderate	87,908	\$6,377,796	\$20,498,824	\$8,98,882	\$35,866,144
Education, Health & Social Services	Average or Below	237,967	\$14,714,550	\$28,482,550	\$21,961,102	\$65,158,202
Entertainment, Recreation & Food	Highest	90,083	\$12,100,998	\$17,193,696	\$11,755,934	\$41,050,628
Government & Public Service	Average or Below	70,099	\$6,497,085	\$4,302,795	\$6,258,582	\$17,058,462
Source: Substance Abuse Disorder Costs for Employers Calculator <a href="https://www.nsc.org/forms/substance-use-employer-calculator/index.aspx">https://www.nsc.org/forms/substance-use-employer-calculator/index.aspx</a>						

Table 4.6 lists the estimated number of employees in each industry in Nebraska impacted by illicit drug abuse by type of drug. Individuals may be dependent on more than one substance. Please review the methodology section of the report for more information about the Substance Abuse Cost Calculator.

**Table 4.6: Number of estimated employees in Nebraska with substance abuse by industry, 2015**

Industry	Prevalence of Substance Use Disorder	Total Number of Employees in Industry	Opioids & Heroin	Marijuana	Other Drugs
Agricultural, Forestry and Fishing	Moderate	55,411	250	751	1,064
Mining	Moderate	1,112	11	1	13
Construction	Highest	49,713	618	1,292	2,472
Manufacturing	Average or Below	97,465	725	981	2,037
Wholesale	Average or Below	42,831	315	416	876
Retail	Moderate	109,523	990	2,599	4,084
Transportation & Utilities	Average or Below	61,551	417	626	1,182
Information & Communications	Moderate	17,502	99	277	455
Finance, Insurance & Real Estate	Moderate	72,962	165	824	1,237
Professional, Technical & Management	Moderate	66,226	599	1,197	2,021
Administration, Support & Waste Management	Moderate	87,908	894	1,589	2,483
Education, Health & Social Services	Average or Below	237,967	1,345	2,689	4,034
Entertainment, Recreation & Food	Highest	90,083	1,425	3,563	5,802
Government & Public Service	Average or Below	70,099	396	396	713

Source: Substance Abuse Disorder Costs for Employers Calculator  
<https://www.nsc.org/forms/substance-use-employer-calculator/index.aspx>

## Illicit Drug-Related Legal Consequences

Drug use places a tremendous strain on the legal system within Nebraska as well as the entire United States. For this report, legal consequences of drug use are separated by (1) arrests for possession or sales of drugs, driving under the influence of drugs, and reported property crime, (2) probation and incarceration for drug related offenses, and (3) children removed from homes due to drug use.

### *Illicit Drug-Related Legal Consequences: Arrests for Drug-Related Crime*

**Data Source: Uniform Crime Reports, Nebraska Crime Commission**

In 2015, there were 11,558 arrests for possession or sales/manufacturing (hereafter sales) of illicit drugs in Nebraska; of which 1,372 (11.9 percent) occurred among juveniles under 18 and 10,186 (88.1 percent) occurred among adults 18 and older. Possession or sales of drugs accounted for about 1 in every 6 adult arrests (16.8 percent), and 1 in every 7 (13.5 percent) juvenile arrests during 2015.

When separating adult arrests by possession vs. sales of drugs, there were 9,159 (89.9 percent) arrests for drug possession and 1,027 (10.1 percent) arrests for drug sales in 2015. For juveniles, 1,287 (93.8 percent) were for possession and 85 (6.2 percent) were for sales.

When looking at arrests overall, regardless of age, for drug possession by drug type in 2015, marijuana was the most common (7,672 arrests), accounting for nearly three in every four drug possession arrests (73.4 percent). This was followed by non-narcotic drugs (1,697 arrests or 16.2 percent), synthetic narcotics (694 arrests or 6.6 percent) with cocaine having the least (383 arrests or 3.7percent) (Figure 4.8).

**Figure 4.8** Percentage of arrests for drug possession in Nebraska (juvenile and adult), by type of drug, 2015

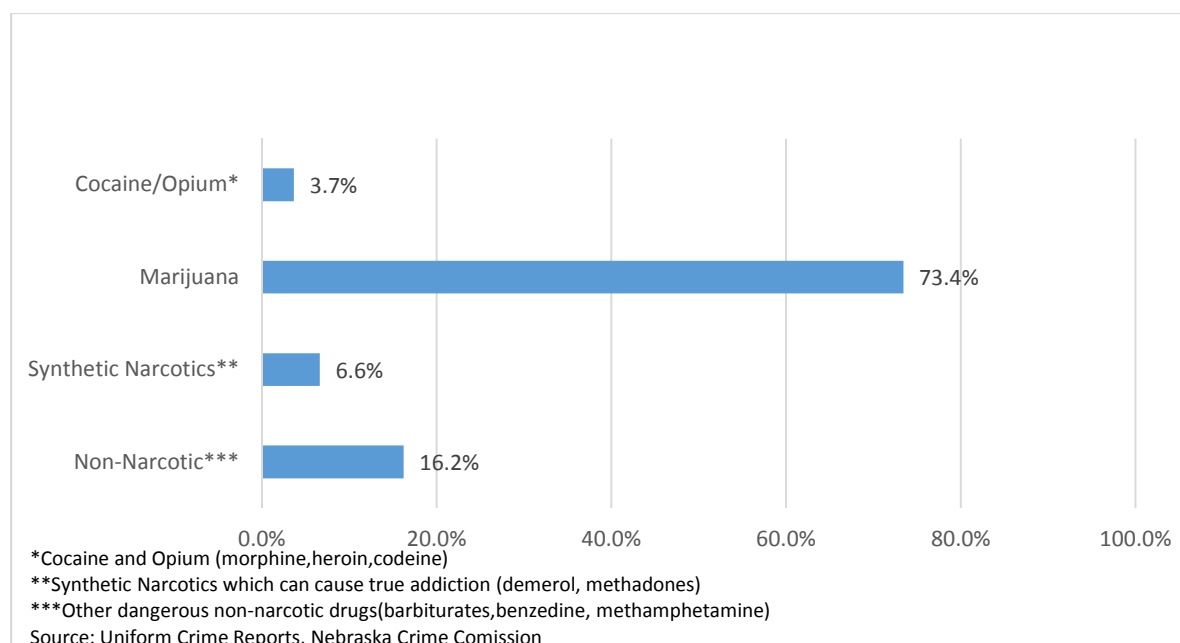
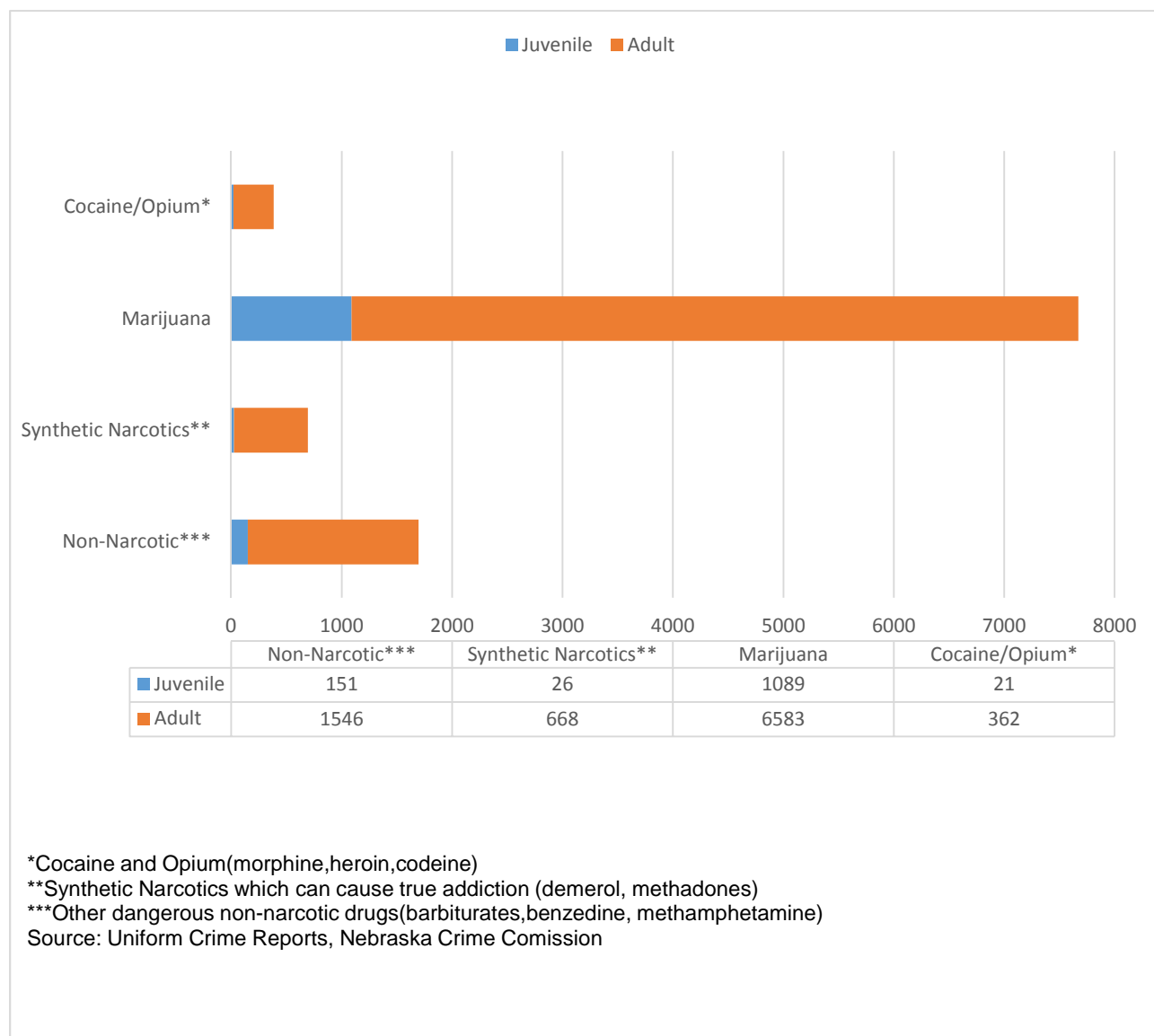
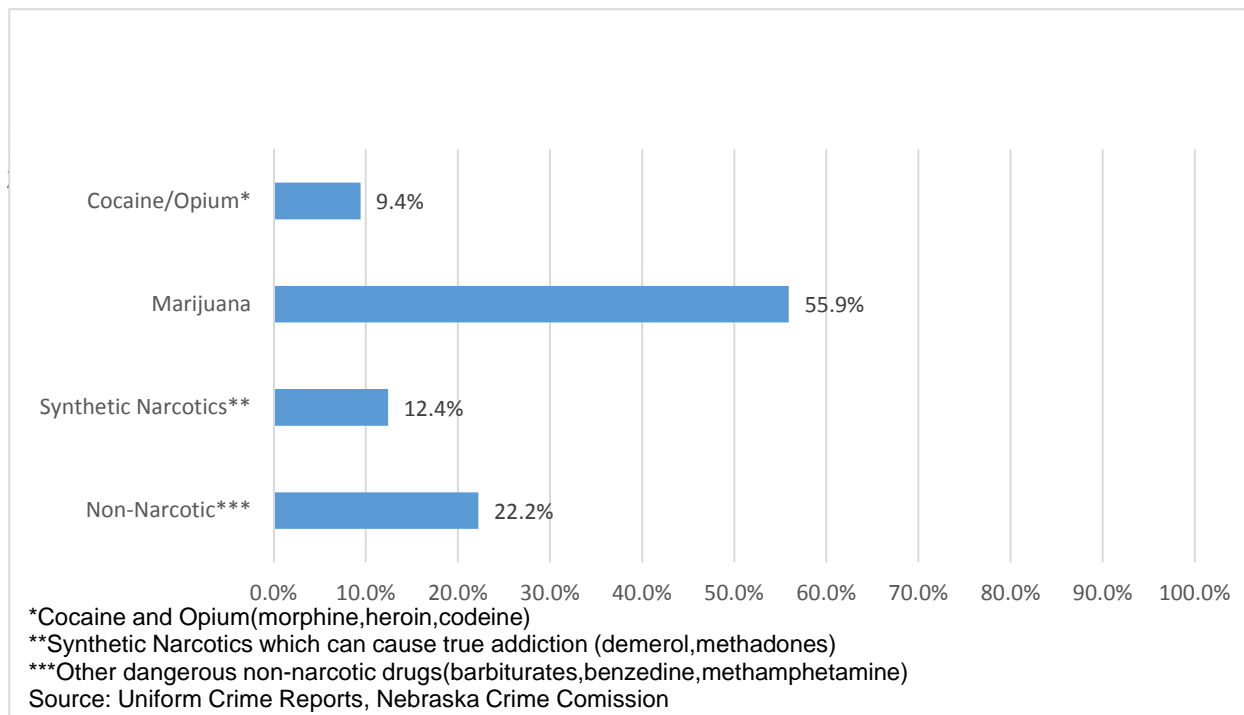


Figure 4.9: Total arrests for drug possession (juvenile and adult), by type of drug, 2015



When looking at arrests for drug sales by drug type in 2015, marijuana is still the most common (622 arrests or 55.9 percent). This is followed by non-narcotic drugs (247 arrests or 22.2 percent) then synthetic narcotics (138 arrests or 12.4 percent) with cocaine having the least (105 arrests or 9.4 percent). (Figure 4.10).

Figure 4.10: Percentage of arrests for drug sale/manufacturing in Nebraska (juvenile and adult), by type of drug, 2015



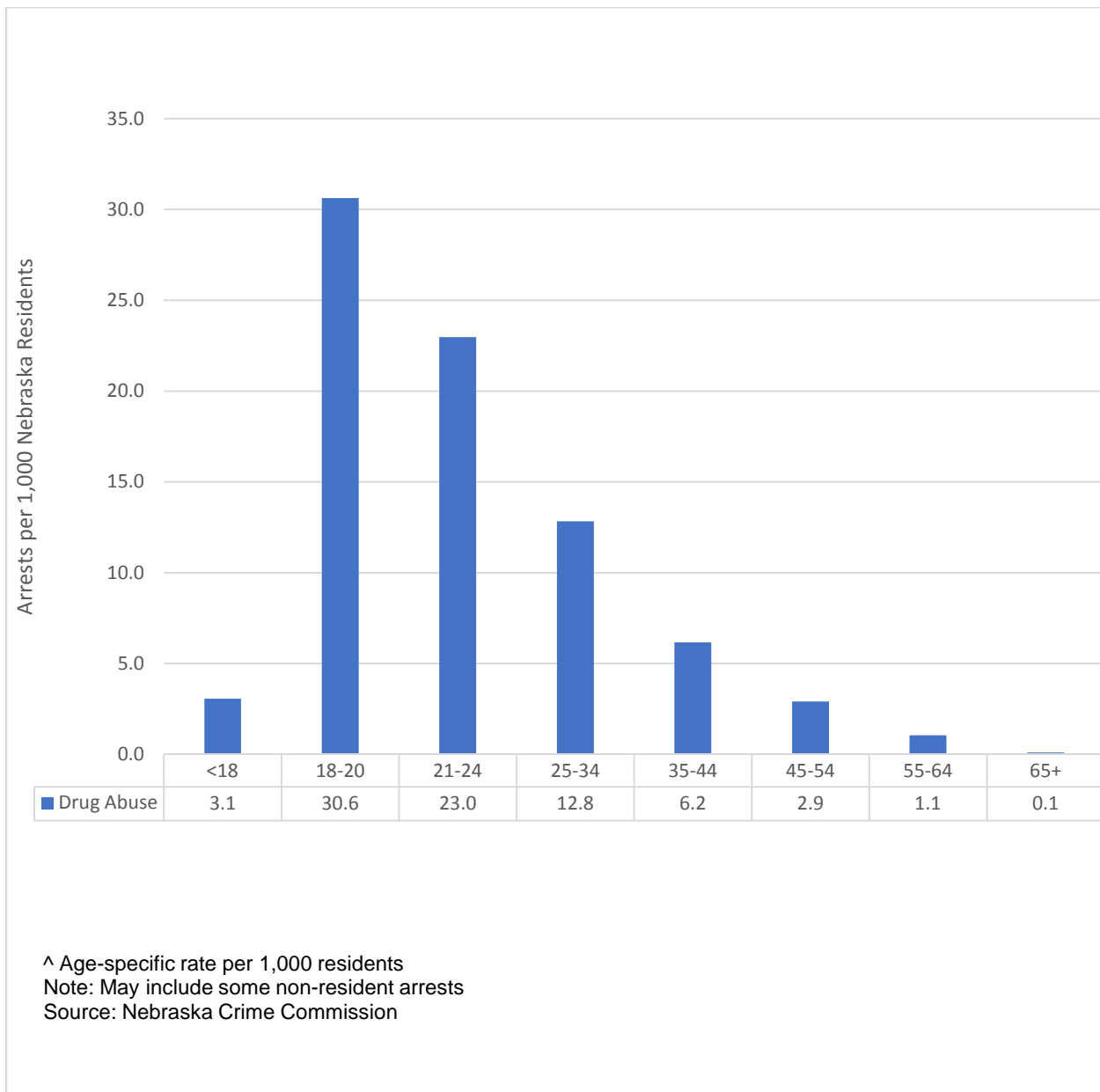
Marijuana arrests as a percentage of all adult arrests have increased substantially since 2000. In 2000, marijuana arrests accounted for 7.7 percent of all adult arrests but by 2015, they accounted for 11.8 percent of all arrests. Arrests for other drugs have increased since 2000 but not nearly as much. In 2000, other drug arrest accounted for 3.2 percent of all adult arrests and by 2015, they accounted for 5.0 percent of all adult arrests.

### ***Arrests for Drug-Related Crime by Demographics***

#### *Differences by age*

Drug related arrests are highest for those 18-20 years old but then decline as age increases. (Figure 4.12).

Figure 4.12: Drug-related arrest rate per 1,000 Nebraska residents^ by age, 2015



### Differences by gender

Males account for 74.9 percent of all drug related arrests with females accounting for 25.1 percent of drug use arrests in 2015.

### Differences by race/ethnicity

Of the arrests for drug related crime in 2015, 77.2 percent were identified as white, 18.2 percent black, 1.9 percent Native American, 0.5 percent Asian, and 2.1 percent unknown.

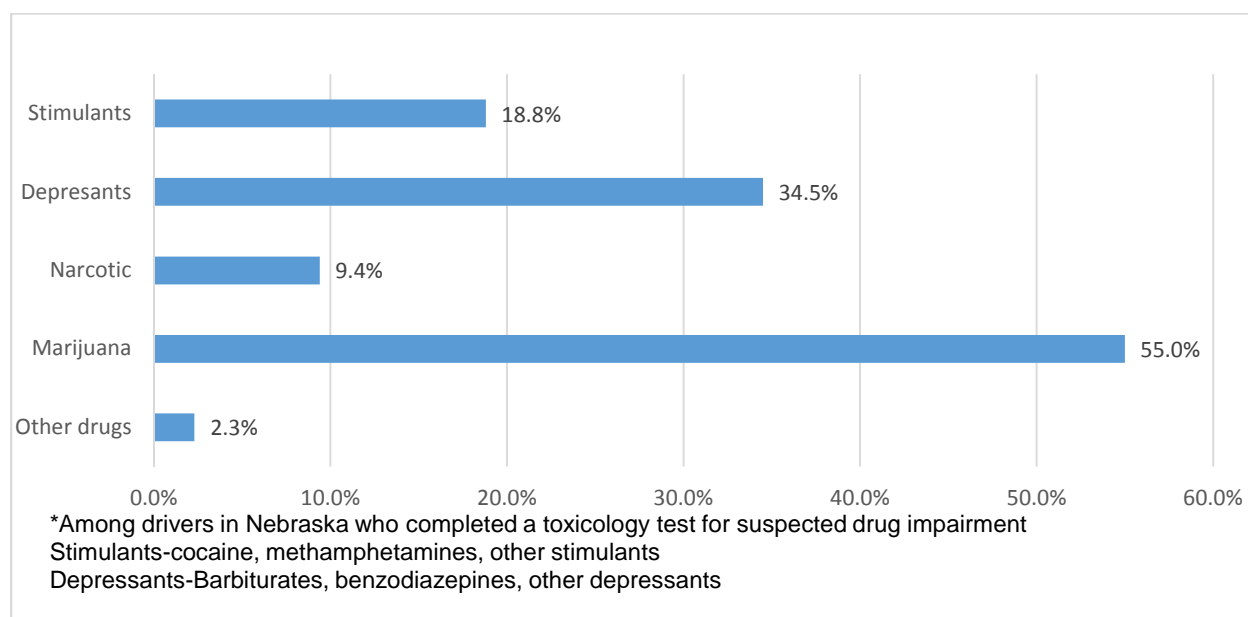
## ***Illicit Drug-Related Legal Consequences: Driving Under the Influence of Drugs***

**Data Source: Drug Recognition Expert Data, Nebraska Office of Highway Safety**

As of April 2017, there were 109 law enforcement officers in Nebraska trained as Drug Recognition Experts (DRE). DREs are specifically trained to identify drivers who may be impaired by non-alcoholic substances. The individuals are suspected of drug impaired driving when they have recorded a low BAC, too low to coincide with their physical impairment. Suspected drivers are put through a 12-step evaluation to determine their degree of impairment. If the suspect is deemed impaired, the results of the 12-step evaluation provide the information to determine what drug category is causing the impairment. During the 12-step evaluation, a toxicology sample is provided (unless refused) to support the DREs opinion.

In 2016, DREs examined 727 persons in Nebraska suspected of non-alcohol drug impaired driving, of which 467 completed a toxicology test. Based on toxicology results, marijuana was the most common substance found in drivers (n=333 drivers, 55.0 percent of completed toxicology tests), followed by depressants (n=209 drivers, 34.5 percent), stimulants (n=114 drivers, 18.8 percent), then narcotics (n=57 drivers, 9.4 percent). Other drugs (including hallucinogens, dissociative anesthetics and inhalants accounted for only 2.3 percent of positive tests (n=14) (Figure 4.13).

**Figure 4.13 Drug-impaired drivers\* in Nebraska, by drug type, 2016**



### ***Trends***

The number of Nebraska drivers examined by DREs has increased slightly from 2012 (595 drivers) to 2016 (727 drivers). The number of drivers completing toxicology tests as a percentage of total drivers examined has decreased from approximately 82 percent in 2012 to 64 percent in 2016.



### Drug Type Trends

Marijuana was the most prevalent drug detected and numbers have remained fairly stable from 2012 (54.4 percent) to 2016 (55.0 percent). Stimulants decreased from 2012 (23.3 percent) to 2016 (18.8 percent) while depressants have increased (24.7 percent in 2012 to 34.5 percent in 2016) (Table 4.7).

Table 4.7: Drug-impaired drivers\* in Nebraska, by drug type, 2012-2016

	Marijuana	Narcotic	Depressants	Stimulants	Other drugs
Year					
2012	54.4%	15.1%	24.7%	23.3%	4.1%
2013	56.9%	11.8%	23.0%	22.8%	3.4%
2014	52.2%	12.1%	27.2%	16.6%	3.3%
2015	51.8%	10.5%	26.6%	23.0%	3.4%
2016	55.0%	9.4%	34.5%	18.8%	2.3%
*Among drivers in Nebraska who completed a toxicology test for suspected drug use Note: Drivers can be on multiple drugs as percentages may exceed 100 percent					

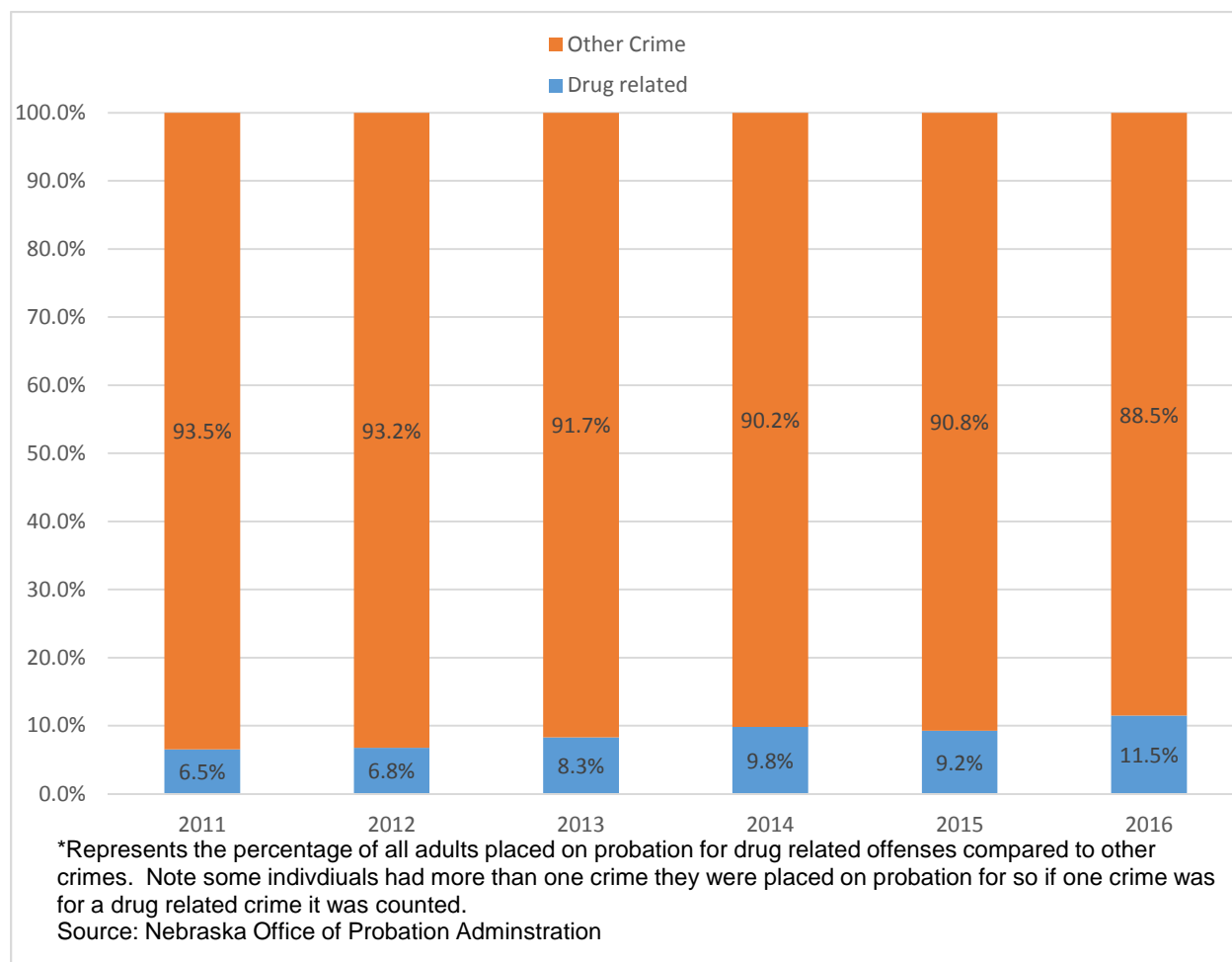
Source: Drug Recognition Expert Data, Nebraska Office of Highway Safety

### ***Illicit Drug-Related Legal Consequences: Probation for Drug-Related Crime***

**Data Source: Nebraska Office of Probation Administration**

Of the 9,362 people sentenced to probation in 2016, 11.5 percent of those sentenced were due to drug-related crime. The percent of adults sentenced to probation for drug-related offenses has increased. In 2011, 6.5 percent of all probations were drug-related but by 2016, it had increased to 11.5 percent (Figure 4.14).

**Figure 4.14: Breakdown of adult probation sentences by crime\*, 2011-2016**

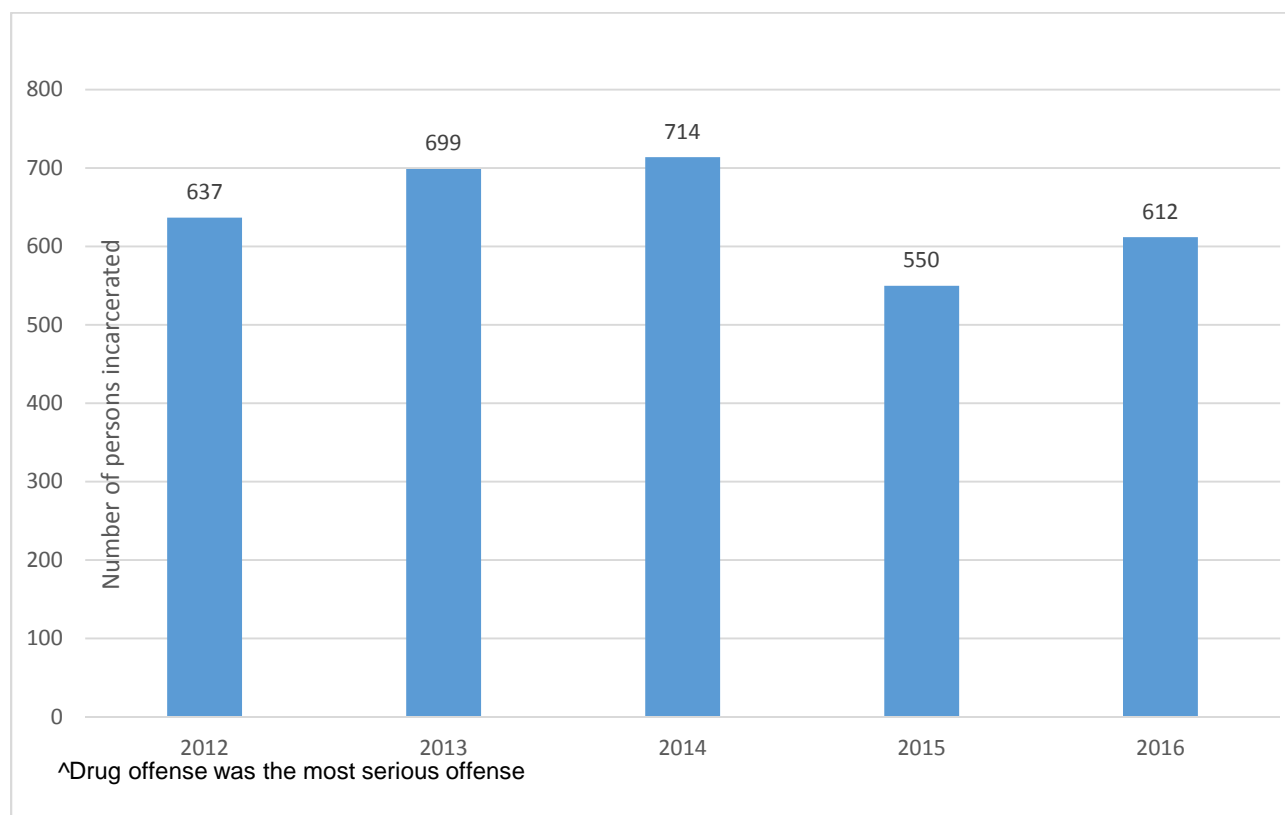


### ***Illicit Drug-Related Legal Consequences: Incarceration for Drug-Related Crime***

**Data Source: Nebraska Department of Correctional Services**

In 2016, there were 612 individuals incarcerated in the Nebraska prison system for a conviction in which a drug offense was the most serious offense committed. This has remained fairly stable since 2012, in which 637 individuals were incarcerated (Figure 4.15).

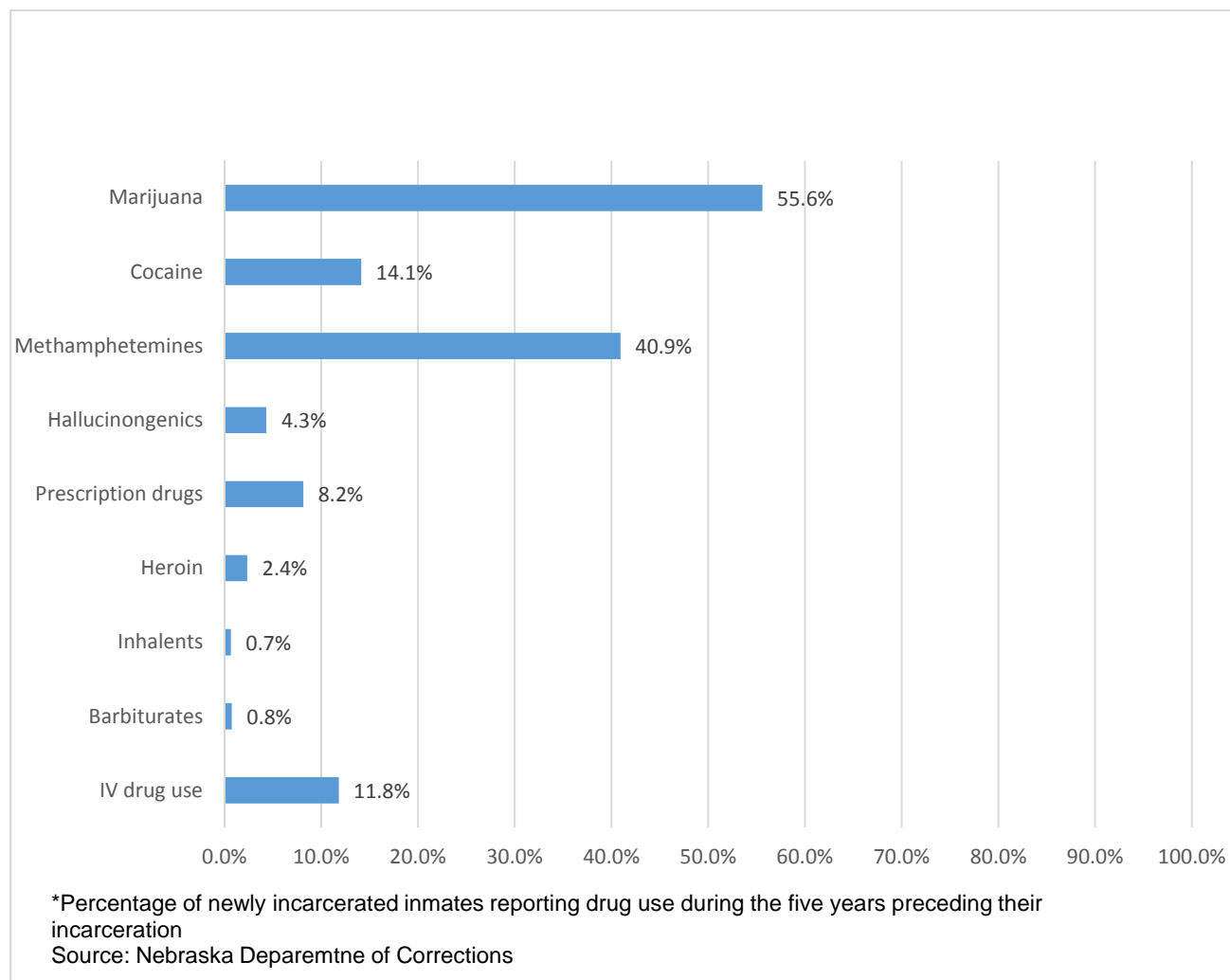
**Figure 4.15: Total number of individuals incarcerated for a drug offense within the Nebraska prison system<sup>^</sup>, 2012-16**



When using 2017 data, which compared differences by gender, there were 556 males incarcerated for drug-related offenses (the 6<sup>th</sup> most common reason for male incarceration) and 125 females incarcerated for drug-related crimes (the most common reason for female incarceration). Close to 1 out of every 3 incarcerations among females were for drug offenses (30.5 percent) compared to 1 out of every 9 incarcerations among males (11.7 percent). Expenses to maintain the drug offense inmates are estimated at approximately \$21 million dollars per year in Nebraska (fiscal year 2016).

All newly admitted inmates (regardless of their offense) are asked to report drug use during the five years preceding their incarceration. This is indicative of drugs used previously and not of what they were incarcerated for. Illicit drug use was very common among inmates prior to their incarceration. In (fiscal year) 2016, marijuana was the most commonly reported drug (reported by 55.6 percent of all new inmates), followed by methamphetamine (40.9 percent), and cocaine (14.1 percent). In addition, 11.8 percent reported IV drug use during the five years preceding their incarceration (Figure 4.16).

Figure 4.16: Percentage of new inmates reporting drug use during the five years preceding their incarceration\*, by drug type, 2016

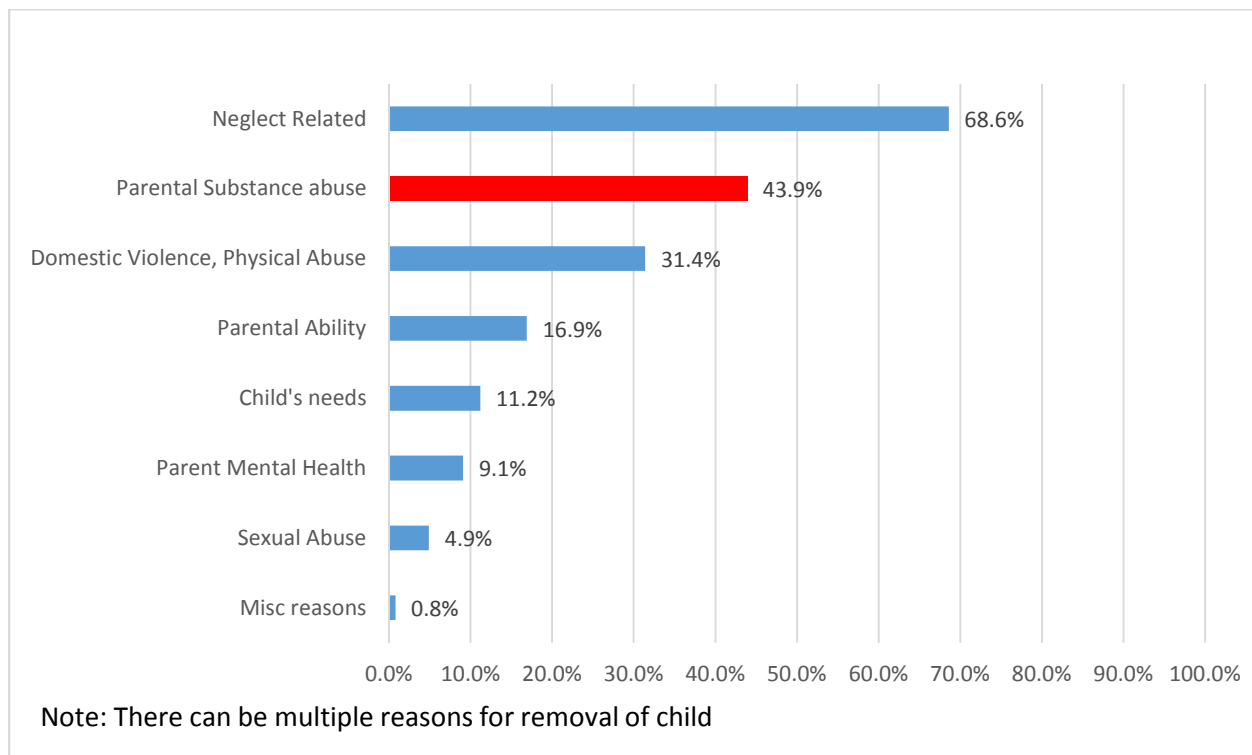


### ***Illicit Drug Use and Children Removed from Home***

The Foster Care Review Office (FCRO) reviews all cases of children who are state wards in out-of-home-care. In their review, a significant number of children were removed due to substance use.

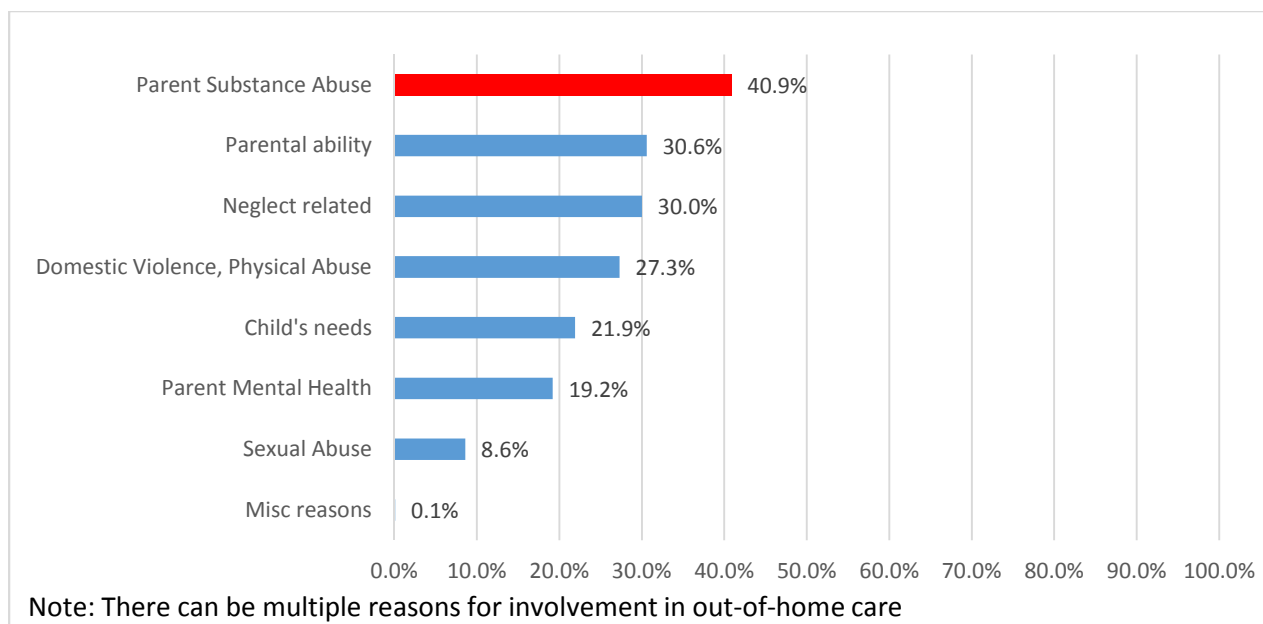
There are two groups of children reviewed by the FCRO, Adjudicated and Non-Adjudicated. Adjudication is the process whereby a court establishes it has jurisdiction for continued intervention in the family's situation. Nearly half (43.9 percent) of children involved in adjudication out-of-home care were placed there due to parental substance use (Figure 4.17). Nearly half of those (23.8 percent) were removed due to parental methamphetamine use while 7.9 percent were removed due to parent marijuana use, 1.7 percent were removed due to parent cocaine use and 0.3 percent were removed due to parent heroin use.

Figure 4.17: Major categories of adjudicated reasons for removal



Of those children who are involved in out-of-home care due to non-adjudicated reasons the number one reason they are involved is due to parental substance use (40.9 percent) (Figure 4.18). It is not possible to break down non-adjudicated percentages into specific types of substances accurately since data is not always available in these cases.

Figure 4.18: Major categories of non-adjudicated reasons for involvement in out-of-home care



## Illicit Drug Dependence, Abuse, and Treatment

### *Illicit Drug Abuse and Dependence*

Illicit drug use can lead to drug abuse and/or dependence. The National Survey on Drug and Health (NSDUH) provides national and state estimates of the percent of people who meet the criteria for drug dependence and abuse. NSDUH defines drug abuse or dependence as those individuals 12 and older who meet the DSM-IV definition for drug dependence or abuse (including illicit drugs and prescription drug abuse) during the 12 months preceding the survey.

#### *Drug dependence and abuse indicator summary*

Indicator	Data Source	Year	Nebraska	Estimated Persons	Nation	Nebraska vs. Nation	Trend
Drug dependence or abuse in past year among persons 12 and older	NSDUH	2013-14*	2.5%	37,000	2.6%	Non-significant	Stable

\*Note due to changes in NSDUH this is the most recent data available

#### *Drug dependence and abuse in Nebraska*

During the combined years of 2013 and 2014, approximately 1 in every 40 Nebraska residents 12 and older (2.5 percent), an estimated 37,000 Nebraskans, reported drug dependence or abuse during the 12 months preceding the survey as defining by the DSM-IV guidelines.

#### *Compared to the nation*

During the combined years of 2013 and 2014, the percentage of Nebraskans 12 and older reporting drug dependence or abuse in Nebraska (2.5 percent) was nearly the same (2.6 percent) as the U.S. overall.

#### *Trends*

Since 2002-2003, there has been no significant change in drug dependence or abuse during the past year in Nebraska. In 2002-2003, 2.8 percent of adults reported drug dependence or abuse in the past year and in 2013-2014, 2.5 percent reported drug dependence or abuse in the past year.

### ***Illicit Drug Dependence Abuse, and Treatment: Illicit Drug Abuse and Dependence by Age***

Overall, 18-25 year olds (6.6 percent) are more likely to report illicit drug abuse or dependence than those who are ages 26 and older (1.6 percent).

- In Nebraska, 6.6 percent of 18-25 year olds report past-year drug dependence or abuse. Nationally, 7.0 percent of U.S. residents reported past-year illicit drug dependence or abuse. The difference is not statistically significant.
- For those ages 26 and older 1.6 percent of Nebraskans report past-year drug dependence or abuse while nationally, 1.8 percent of adults 26 and older report drug dependence or abuse. The difference is also not statistically significant.

### ***Illicit Drug Dependence, Abuse, and Treatment: Nebraskans in Need of Treatment but Not Receiving Treatment for Illicit Drug Use***

In addition to showing the percent of Nebraskans who are abusing or dependent on drugs, NSDUH also provides estimates for the percent who are in need of treatment for illicit drug use, but not receiving it. NSDUH defines “in need of treatment but not receiving” as respondents ages 12 and older who are classified as needing treatment for illicit drugs but not receiving treatment for an illicit drug problem at a specialty facility.

#### ***In need of treatment but not receiving treatment indicator summary***

Indicator	Data Source	Year	Nebraska	Estimated Persons	Nation	Nebraska vs. Nation	Trend
In need of treatment for illicit drugs but not receiving treatment in past year among persons 12 and older	NSDUH	2013/2014*	2.2%	33,000	2.4%	Non-significant	Stable

\*Note due to NSDUH changes this is the most current data available

#### ***Nebraskans in need of treatment but not receiving treatment for illicit drug use***

During the combined years of 2013 and 2014, approximately 1 in every 45 Nebraska residents ages 12 and older (2.2 percent), an estimated 33,000 Nebraskans, reported needing treatment for Illicit drug use but not receiving treatment.

#### ***Compared to the nation***

During the combined years of 2013 and 2014, the percentage of Nebraskans 12 and older reporting needing treatment for illicit drug use but not receiving any (2.2 percent) was the nearly the same as the U.S. overall (2.4 percent).

#### ***Trends***

Since 2002-03 there has been no significant change in the percent of individuals in need of illicit drug treatment but not receiving any. In 2002-2003 2.6 percent of adults reported need of treatment for illicit drug use but not receiving any in the past year and in 2013-2014 2.2 percent reported need of treatment for illicit drug use but not receiving any.

### ***Illicit Drug Dependence, Abuse, and Treatment: Nebraskans in Need of Treatment but Not Receiving Treatment for Illicit Drug Use by Age***

Overall, 18-25 year olds (5.9 percent) are more likely to report a need for treatment of illicit drugs than those who are ages 26 and older (1.3 percent).

- In Nebraska, 5.9 percent of 18-25 year olds report that in the past year they needed treatment for illicit drug use. Nationally, 6.4 percent of U.S. residents needed treatment of illicit drug use. The difference is not statistically significant.
- For those ages 26 and older, 1.3 percent of Nebraskans report that in the past year they needed treatment for illicit drug use, while nationally 1.6 percent of adults 26 and older report drug dependence or abuse. The difference is also not statistically significant.



## ***Illicit Drug Dependence Abuse, and Treatment: Drug Treatment***

**Source: Centralized Data System, Nebraska Division of Behavioral Health**

Treatment data presented in this report includes services funded through the Nebraska Department of Health and Human Services, Division of Behavioral Health as well as select private treatment providers who submit their patient data to the State.

In 2016, there were 20,824 substance abuse treatment admissions among 10,379 individuals served by the system. During admission, individuals were asked to report their primary, secondary and tertiary drugs of choice. The following information is based on data from those who reported their drug of choice on the admission form.

### *Drug involvement in substance abuse treatment services*

- Methamphetamine was listed as the primary drug of choice during one in every five substance use treatment admissions (19.7 percent) during 2016, making it the second most commonly reported primary drug of choice next to alcohol. Methamphetamine was followed by marijuana (11.4 percent), other opiate drugs (e.g., morphine, heroin, codeine, methadone; 4.4 percent) and cocaine (1.1 percent) (Figure 4.19).
- Admission where methamphetamine was the primary drug of choice have increased from 8.4 percent in 2011 to 19.7 percent in 2016, while cocaine admissions have decreased from 2.9 percent in 2011 to 1.1 percent in 2016 (Figure 4.20 ).
- In contrast to only examining the primary drug of choice, marijuana was listed as one of the top three drugs of choice during approximately two-fifths of all treatment admissions (38.5 percent) in 2016, making it second to alcohol (72.7 percent). Marijuana was followed by methamphetamine (30.8 percent), and opioids (8.5 percent).
- When examining drug of choice by gender, using all 2016 treatment admissions, females were twice as likely to report methamphetamine as their primary drug of choice over males (29.9 percent of females compared to 15.0 percent of males). In contrast, males were more likely to report alcohol as their primary drug of choice (62.4 percent of males compared to 42.8 percent of females).

Figure 4.19: Primary drug of choice among Nebraska substance use treatment center admissions, by gender, 2016

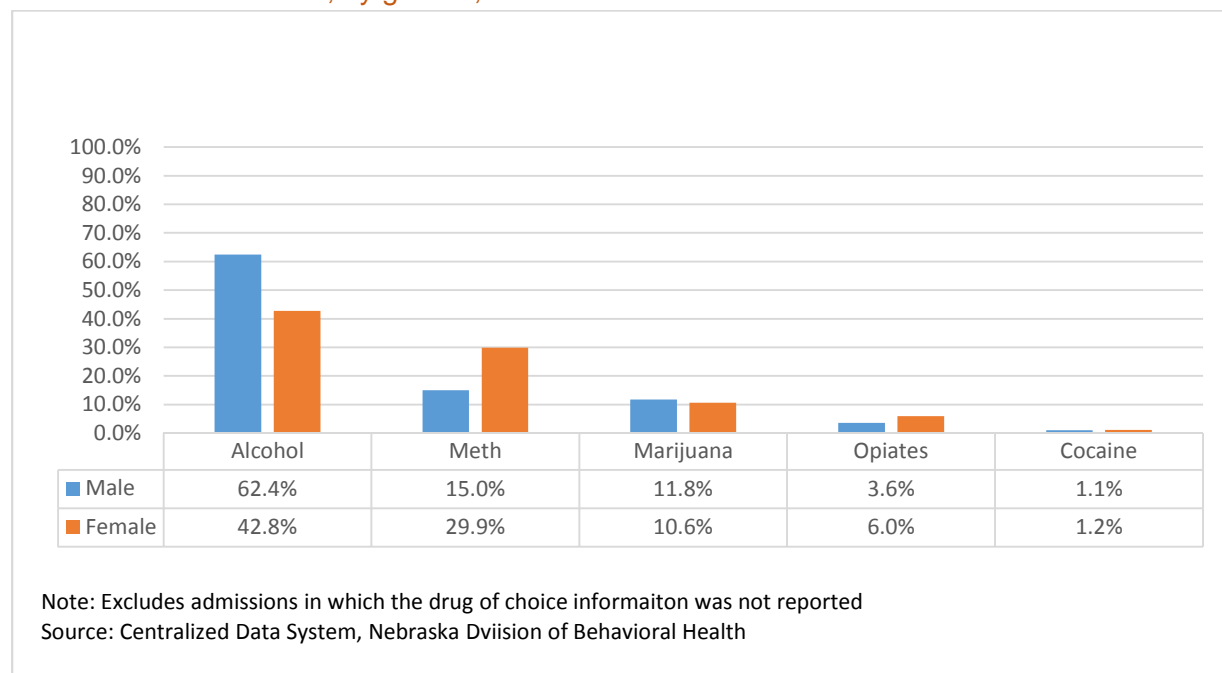
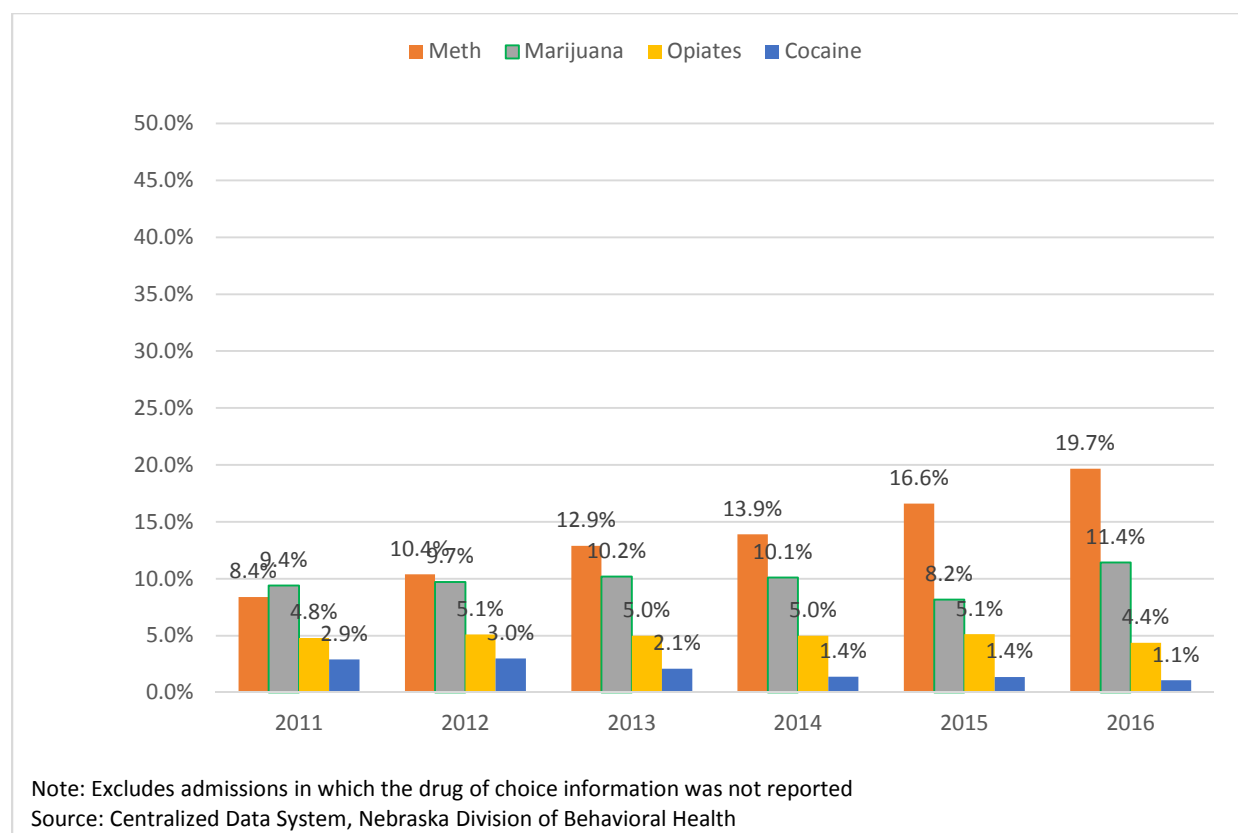


Figure 4.20: Primary drug of choice (excluding alcohol) among Nebraska substance center admissions by year



### Treatment admission demographics

The following table (4.8) provides the demographics for all substance use treatment admissions (regardless of their drug of choice) for gender, age, and race.

**Table 4.8: Demographics of individuals admitted for substance use treatment in Nebraska (2016)**

Demographics of Individuals Admitted for Substance Use Treatment in Nebraska, 2016					
	<u>Number</u>	<u>Percent</u>		<u>Number</u>	<u>Percent</u>
Total	10,379	100.0%	Gender		
			Male	7,232	69.7%
Race/Ethnicity*			Female	3,133	30.2%
NH Asian	73	0.7%			
NH Black	1,037	10.0%	Age		
NH Multi-Racial	71	0.7%	<12	2	0.0%
NH Native American/Native Hawaiian	488	4.7%	12-17	184	1.8%
NH White	7,455	71.8%	18-20	830	8.0%
Hispanic**	923	8.9%	21-24	1,539	14.8%
Other/Unknown	332	3.2%	25-34	3,568	34.4%
			35-44	2,123	20.5%
Urban Rural			45-54	1,413	13.6%
Large Urban	6,094	58.7%	55-64	625	6.0%
Small Urban	2,707	26.1%	65+	94	0.9%
Rural	1,251	12.1%	Unknown	1	0.0%
*NH indicates Non-Hispanic					
**Hispanics can be of any race					
Note: Numbers represent individuals, not the number of admissions					
Source: Centralized Data System, Nebraska Division of Behavioral Health					

### References Illicit Drug Use

**The Economic Costs of Alcohol and Drug Abuse in the United States - 1992.** National Institute on Drug abuse. Retrieved August 2015 from <http://archives.drugabuse.gov/EconomicCosts/Chapter6.html>

## Section 5:

# Mental Illness and Suicide in Nebraska: Prevalence and Consequences



# ***Mental Illness and Suicide – Summary of Key Findings***

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## ***Mental Illness in Nebraska***

### ***A significant number of adults suffer frequent mental distress***

- In 2015, nearly 1 in every 11 Nebraska adults (8.9percent) reported not having good mental health on 14 or more of the 30 days preceding the survey.

### ***Depression affects a significant number of Nebraska residents***

- From 2014 through 2015, 1 in 14 Nebraska residents (7.2 percent) reported a major depressive episode in the past year.
- In 2015, 1 in 4 high school students (24.1 percent) reported they felt sad or hopeless every day for two weeks in a row.

### ***Mental illness affects a large number of Nebraska residents***

- Nearly 1 in 5 (18.2 percent) adults, 18 and older, reported having a mental illness in the last year in 2014-2015.
- Nearly 1 in 22 adults, 18 and older (4.4 percent), reported having a serious mental illness during 2014-2015.

### ***A significant number of Nebraska residents are hospitalized due to mental illness***

- In 2015, there were 12,468 hospitalizations in Nebraska in which mental illness was listed as the primary reason for hospitalization.
- The largest category of mental illness hospitalizations were those due to mood and depressive disorders (63.3percent).

## ***Suicide in Nebraska***

### ***Thoughts of suicide occur among a significant number of Nebraska residents***

- Nearly one in 24 adults, ages 18 and older (4.2 percent), reported having serious thoughts of suicide in 2014-2015.
- In 2015, 1 in 7 high school students (14.6 percent) reported they had serious thoughts of suicide in the past year.
- In addition, also in 2015, nearly 1 in eight high school students (13.3 percent) reported making a plan of how they would commit suicide.

### ***Suicide is a significant problem in Nebraska***

- In 2015, there were 221 deaths due to suicide, making it the 11<sup>th</sup> highest cause of death.
- In 2015, 1 in 11 high school students (8.9 percent) reported attempting suicide in the past year.

## *Demographic Differences*

### *Differences by age*

- Adults ages 18-24 were the most likely to report frequent mental distress while those 65 and older reported significantly less mental distress in the years of 2011-2015 combined.
- Individuals' ages (18-44 years old) were the most likely age group to be hospitalized for mental illness in 2015.
- Residents, ages 18-25, were the most likely to report having serious thoughts of suicide from 2014 to 2015.
- Residents, ages 45-54, had the highest age-specific death rate due to suicide from 2011 to 2015.

### *Differences by gender*

- Females were significantly more likely (10.6 percent) to report frequent mental distress than males (7.0 percent) from 2011 to 2015.
- From 2011 to 2015, males have a higher age-adjusted mortality rate from suicide than females.

### *Differences by urban/rural*

- Adults living within rural counties reported the lowest percentage of frequent mental distress (7.8 percent) for the years of 2011 to 2015, while adults in urban large (9.0 percent) and urban small (9.4 percent) reported significantly higher rates of frequent mental distress.
- Larger urban counties had lower age-adjusted mortality rates for suicide deaths than rural counties from 2011 to 2015.

### *Differences by race/ethnicity*

- Multi-racial and Native American respondents reported significantly higher percentages of frequent mental distress (17.3 and 15.6 percent, respectively) while Asians reported significantly lower rates (5.6 percent).
- White residents in Nebraska had the highest age-adjusted mortality rates for suicide deaths than other race and ethnic groups from 2011 to 2015.

## *Mental Illness: Patterns and Concerns*

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Mental illnesses refer to disorders characterized by dysregulation of mood, thought, and/or behavior, as recognized by the Diagnostic and Statistical Manual, 5th edition (DSM-5)<sup>1,2</sup>. In a given year, approximately 1 in 5 adults in the U.S. experiences mental illness<sup>3</sup>. Although mental health and substance use disorders are very common in the general population, due to a variety of reasons, including stigma associated with these conditions and limited access to care, the use of treatment remains low<sup>4</sup>.

While mental health disorders are relatively common, the burden of illness is most profound among those who have disability due to serious mental illness (SMI) and serious emotional disturbances (SED). According to the Federal Register (Volume 64, No. 121), SMI among adults (18 years and older) is defined as having, at any time during the previous year, a diagnosable mental, behavioral, or emotional disorder that causes serious functioning impairment that substantially interferes with or limits one or more major life activities. SMIs include major depression, schizophrenia, and bipolar disorder. SMI affects about 4% of the U.S. and Nebraska adult population. SMI is a chronic condition, and without treatment and support, persons with SMIs may experience difficulties living their lives to the fullest capacity.

A similar issue exists for children with serious emotional disturbance (SED). At the federal level, SED refers to children and youth who have in the past year had a diagnosable mental, behavioral, or emotional disorder, one that resulted in functional impairment that substantially interfered with or limited the child's role or functioning in family, school, or community activity. There is limited information about estimates for SED because current population surveys do not have an indicator for SED.

Mental disorders are among the most common causes of disability. The resulting disease burden of mental illness is among the highest of all diseases. Mental illness the leading cause of disability in the United States, accounting for 18.7 percent of all years of life lost to disability and premature mortality. In addition, suicide is the 10th leading cause of death in the United States, accounting for the deaths of approximately 43,000 Americans in 2014<sup>5</sup>.

Mental health and physical health are closely connected. Mental health plays a major role in a person's ability to maintain good physical health. Mental illnesses, such as depression and anxiety, affect people's ability to participate in health-promoting behaviors. In turn, problems with physical health, such as chronic diseases, can have a serious impact on mental health and decrease a person's ability to participate in treatment and recovery<sup>5</sup>.

The State Epidemiological Profile examines mental health in terms of how many Nebraskans report symptoms of depression and how many report mental illness or have been hospitalized for mental illness. In addition, data involving suicidal thoughts and attempts will be reviewed.

# Mental Illness: Adult Depression and Psychological Distress

## Adult Frequent Mental Distress

Frequent mental distress is indicated by respondents would rate their overall mental health 'not good' on 14 or more of the past 30 days.

### Frequent mental distress indicator summary

Indicator	Data Source	Year	Nebraska	Estimated Persons	Nation	Nebraska vs. Nation	Trend
Frequent mental distress	BRFSS	2015	8.9%	127,000	11.2%	Lower	Stable

### Current levels of frequent mental distress in Nebraska

In 2015, nearly 1 in every 11 Nebraska adults (8.9 percent), an estimated 127,000 adults, reported not having good mental health on 14 or more of the 30 days preceding the survey.

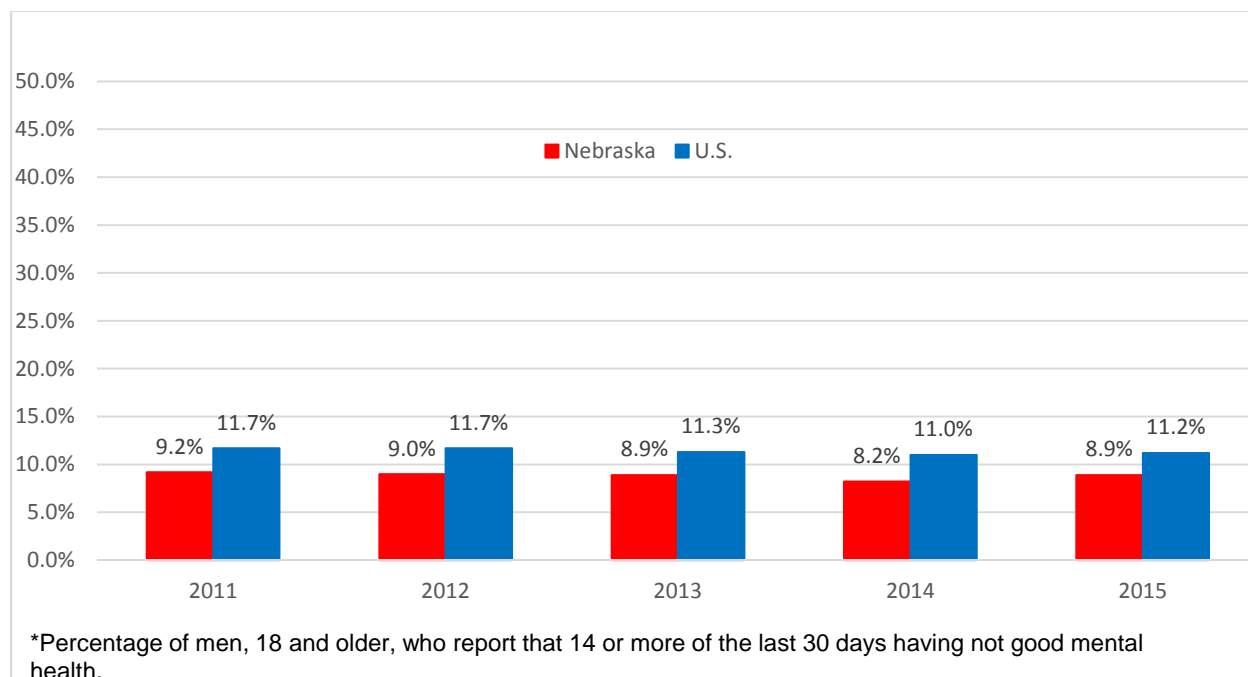
### Compared to the nation

In 2015, adults in Nebraska were less likely than adults in the U.S. overall to report not having good mental health on 14 or more of the last 30 days, 8.9 percent and 11.2 percent, respectively.

### Trends

As shown in Figure 5.1, Nebraska has a stable percentage of people who reported frequent mental distress from 2011 to 2015.

Figure 5.1: Frequent mental distress among Nebraskans and U.S. adults, 2011-2015





## Adult Frequent Mental Distress by Demographics

### Differences by age

Adults ages 18-24 were the most likely to report having frequent mental distress (10.7 percent) in 2011-2015 combined. Starting at age 25, the percentage reporting frequent mental distress declines to 9.9 percent but then increases at ages 45-64, up to 10.1 percent. Starting at age 65, there is a significant decline in frequent mental distress, with only 5.4 percent of Nebraskans ages 65-74 indicating frequent mental distress.

### Differences by gender

Females were significantly more likely (10.6 percent) to report frequent mental distress than males (7.0 percent) from 2011 to 2015.

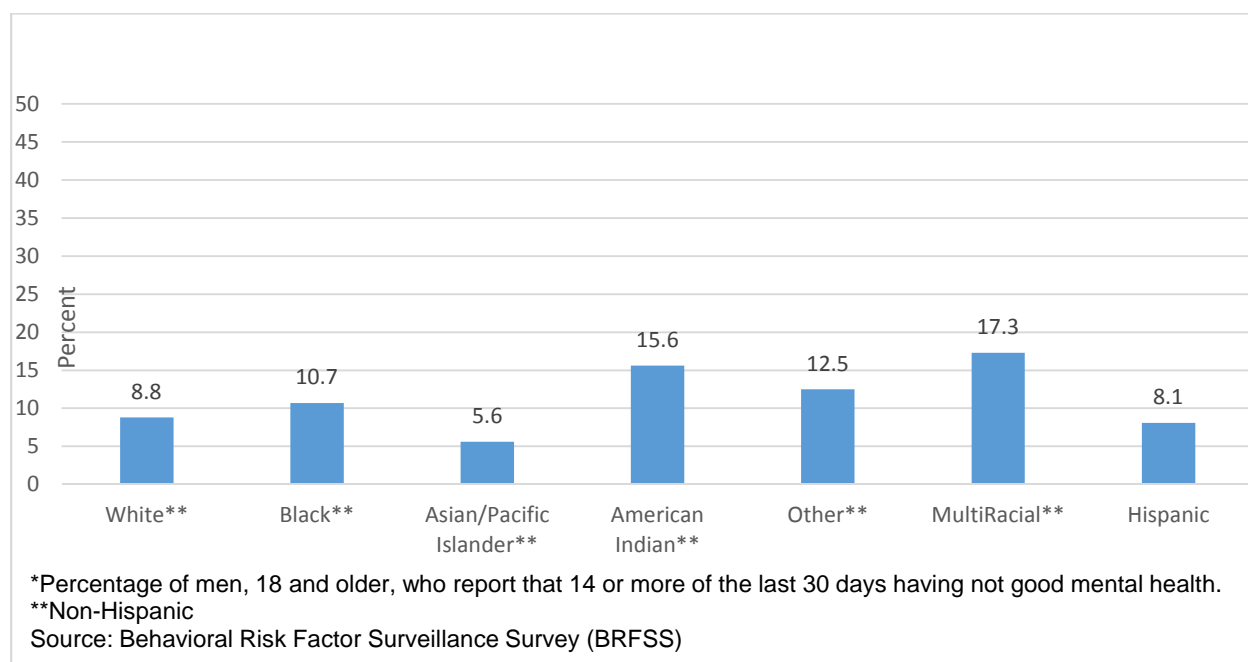
### Differences by urban/rural

Adults living in rural counties reported the lowest percentage of frequent mental distress (7.8 percent) for the years of 2011 to 2015, while adults in urban large (9.0 percent) and urban small (9.4 percent) reported significantly higher rates of frequent mental distress.

### Differences by race/ethnicity

When looking at differences in frequent mental distress from 2011 to 2015, beyond differences in age, there were a few significant differences. Multiracial and Native American respondents reported significantly higher percentages of frequent mental distress than others (17.3 and 15.6 percent respectively). Asians were the group with the lowest number of frequent mental distress (5.6 percent). Figure 5.2 provides a breakdown of frequent mental distress among Nebraska adults by race/ethnicity.

Figure 5.2: Frequent mental distress (age-adjusted) among Nebraska adults\* by race/ethnicity 2011-2015 combined



## ***Depression and Psychological Distress: Major Depressive Episodes***

Data concerning major depressive episodes among adults are available through the National Survey on Drug Use and Health (NSDUH). This measure asks respondents if they have had at least one major depressive episode in the past year. A Major Depressive Episode (MDE) is defined in the 4<sup>th</sup> Edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV), as a period of at least two weeks during which time a person experienced a depressed mood or loss of interest or pleasure in daily activities and had a majority of specified depressive symptoms.

### ***Major depressive episodes indicator summary***

Indicator	Data Source	Year	Nebraska	Estimated Persons	Nation	Nebraska vs. Nation	Trend
Adults with major depressive episode in past year among adults 18 +	NSDUH	2014-15	7.2%	102,000	6.6%	Non-significant	Stable

### ***Major depressive episodes in Nebraska***

During the combined years of 2014 and 2015, approximately 1 in every 13 Nebraska adults, ages 18 and older (7.2 percent), an estimated 102,000 Nebraskans, reported having a major depressive episode in the past year.

### ***Compared to the nation***

During the combined years of 2012 and 2013, the percentage of Nebraskans 18 and older who reporting having a major depressive episode (7.2 percent) was similar to the U.S. overall (6.6 percent).

### ***Trends***

Since 2008-2009, there has been no significant change in the percent of Nebraskans who report major depressive episodes in the past year. In 2008-2009, 6.3 percent of Nebraskans reported a major depressive episode and in 2014-2015, 7.2 percent of Nebraskans reported a major depressive episode.

## ***Depression and Psychological Distress: Major Depressive Episodes by Age***

Overall, 18-25 year olds (10.8 percent) report similar levels of major depressive episodes as those who are ages 26 and older (6.6 percent). While 18-25 year olds report higher levels, the differences are not statistically significant.

- In Nebraska, 10.8 percent of 18-25 year olds report that in the past year they had a major depressive episode. Nationally, 9.8 percent of U.S. residents reported a major depressive episode. The difference is not statistically significant.
- For those ages 26 and older, 6.6 percent of Nebraskans reported a major depressive episode in the past year, while nationally 6.1 percent of adults 26 and older reported a major depressive episode. The difference is also not statistically significant.

## ***Adult Depression and Psychological Distress: Any Mental Illness***

The NSDUH asked respondents a series of questions to determine if a respondent has a diagnosed mental, behavioral, or emotional disorder, other than a developmental or substance use disorder, as assessed by the Mental Health Surveillance Study (MHSS) *Structured Clinical Interview for the Diagnostic and Statistical Manual of Mental Disorders--Fourth Edition--Research Version--Axis 1 Disorders* (MHSS-SCID), which is based on the 4th Edition of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV). Three categories of mental illness severity are defined based on the level of functional impairment: mild mental illness, moderate mental illness, and serious mental illness (SMI). Any mental illness (AMI) includes individuals in any of the three categories.

### ***Mental illness indicator summary***

Indicator	Data Source	Year	Nebraska	Estimated Persons	Nation	Nebraska vs. Nation	Trend
Adults with mental illness past year among adults 18 and older	NSDUH	2014/2015	18.2	258,000	18.0%	Non-significant	Stable

### ***Mental illness in Nebraska***

During the combined years of 2014 and 2015, approximately 1 in every 5 Nebraska adults ages 18 and older (18.2 percent), an estimated 258,000 Nebraskans, reported having some form of mental illness in the past year.

### ***Compared to the nation***

During the combined years of 2014 and 2015, the percentage of Nebraskans 18 and older reporting some form of mental illness (18.2 percent) and is very similar to the U.S. overall (18.0 percent).

### ***Trends***

Since 2008-2009, there has been no significant change in the percent of Nebraskans who report any mental illness in the past year. In 2008-2009, 17.6 percent of Nebraskans reported a mental illness, and in 2014-2015 18.2 percent of Nebraskans reported a mental illness. There is no statistically significant difference.

### ***Adult Depression and Psychological Distress: Any Mental Illness by Age***

Overall, 18-25 year olds (20.0 percent) report similar levels of mental illness as those who are ages 26 and older (17.9 percent). While 18-25 year olds report higher levels, the differences are not statistically significant.

- In Nebraska, 20.0 percent of 18-25 year olds report past-year mental illness. Nationally, 20.9 percent of U.S. residents reported past-year mental illness. The difference is not statistically significant.
- For those ages 26 and older, 17.9 percent of Nebraskans reported past-year mental illness, while nationally 17.5 percent of adults 26 and older reported past-year mental illness. The difference is also not statistically significant.

## ***Adult Depression and Psychological Distress: Serious Mental Illness***

Of those who indicated they had a mental illness, a number reported suffering a serious mental illness (SMI). While the percentage is smaller than any other category of mental illness, due to the severity of the illness, it is important to focus on those with the most serious illnesses.

### *Serious mental illness indicator summary*

Indicator	Data Source	Year	Nebraska	Estimated Persons	Nation	Nebraska vs. Nation	Trend
Adults with serious mental illness past year among adults 18 and older	NSDUH	2014-15	4.4%	63,000	4.1%	Non-significant	Stable

### *Serious mental illness in Nebraska*

During the combined years of 2014 and 2015, approximately 1 in every 22 Nebraska adults, 18 and older (4.4 percent), an estimated 63,000 Nebraskans, reported having a serious mental illness in the past year.

### *Compared to the nation*

During the combined years of 2014 and 2015, the percentage of Nebraskans, ages 18 and older, reporting serious mental illness (4.4 percent) was very similar to the U.S. overall (4.1 percent).

### *Trends*

Since 2008-2009 there has been no significant change in the percent of Nebraskans who report serious mental illness in the past year. In 2008-2009, 3.6 percent of Nebraskans reported a serious mental illness and in 2014-2015, 4.4 percent of Nebraskans reported a serious mental illness. There is no statistically significant difference.

## ***Adult Depression and Psychological Distress: Serious Mental Illness by Age***

Overall, 18-25 year olds (5.7 percent) report similar levels of serious mental illness as those who are ages 26 and older (4.2 percent). While 18-25 year olds report higher levels, the differences are not statistically significant.

- In Nebraska, 5.7 percent of 18-25 year olds report past year serious mental illness. Nationally, 4.9 percent of U.S. residents reported past year serious mental illness. The difference is not statistically significant.
- For those ages 26 and older, 4.2 percent of Nebraskans reported past year serious mental illness while nationally 3.9 percent of adults 26 and older reported the same. The difference is also not statistically significant.

## ***Depression and Psychological Distress: Inpatient Mental Illness Hospitalizations***

### **Data Source: Nebraska Hospital Discharge Data**

In 2014, there were 12,938 hospitalizations in Nebraska in which mental illness was listed as the primary reason for the hospitalization (Table 5.1). The number of mental illness hospitalizations has remained fairly steady since 2011, when there were 12,829.

**Table 5.1: Inpatient hospital visits in Nebraska due to mental illness by age and gender (2014)**

	Number	Percent
<b>Total</b>	12,938	
<b>Gender</b>		
Male	6,055	46.8%
Female	6,883	53.2%
<b>Age</b>		
0-17	2,711	21.0%
18-44	6,073	46.9%
45-64	3,294	25.5%
65-84	734	5.7%
85+	126	1.0%

^Includes hospitalization visits in which a mental disorder code was listed as the primary cause for the visit

Source: Nebraska Hospital Discharge Data

### ***Inpatient Mental Illness Hospitalizations by Demographics***

#### ***Differences by age***

In 2014, nearly half of inpatient hospitalizations for mental illness occurred for those between the ages of 18 to 44. One in 4 occurred for those 45-64 years old.

#### ***Differences by gender***

In 2014, there were slightly more mental illness hospitalizations for females than males.

#### ***Differences by urban/rural***

In 2014, residents of urban large counties had the most inpatient hospitalizations (8,863) and had the highest rate (76.8 hospitalizations per 10,000 population). Residents of rural counties reported the least (1,588 and 40.7 hospitalizations per 10,000 population), while urban small counties had 2,487 hospitalizations and 68.4 hospitalizations per 10,000 population.

### ***Inpatient Mental Illness Hospitalizations by Category of Mental Illness***

In 2014, most hospitalizations for mental illness (89.0percent) were due to mental disorders not caused by alcohol or drugs. The largest category of mental illness hospitalizations were those due to mood and depressive disorders (61.9percent). Those who were hospitalized for schizophrenia also contributed to a smaller, but significant amount of hospitalizations (14.2percent) (Table 5.2).

**Table 5.2: Inpatient hospital visits in Nebraska, by mental illness, gender and age (2014)**

Inpatient hospital visits in Nebraska <sup>1</sup> due to mental disorders (excluding those that are drug or alcohol-induced) by age and gender, 2014			Inpatient hospital visits in Nebraska <sup>2</sup> due to mood and depressive disorders by age and gender, 2014		Inpatient hospital visits in Nebraska <sup>3</sup> due to schizophrenia by age and gender, 2014	
	Number	Percent	Number	Percent	Number	Percent
Total	11,509		8,008		1,843	
Gender						
Male	5,085	44.2%	3,148	39.3%	1,054	57.2%
Female	6,424	55.8%	4,860	60.7%	789	42.8%
Age						
0-17	2,690	23.4%	2,177	27.2%	13	0.7%
18-44	5,404	47.0%	3,729	46.6%	1,052	57.1%
45-64	2,648	23.0%	1,724	21.5%	678	36.8%
65-84	649	5.6%	341	4.3%	96	5.2%
85+	118	1.0%	37	0.5%	4	0.2%

<sup>1</sup>Includes hospitalization in which a mental illness code was listed as the primary cause for the visit

<sup>2</sup>Includes hospitalization in which a mood or depressive disorder code was listed as the primary cause for the visit

<sup>3</sup>Includes hospitalization in which a schizophrenia code was listed as the primary cause for the visit

Source: Nebraska Hospital Discharge Data

## Youth Depression and Psychological Distress

### Youth Sad/Hopeless

The Youth Risk Behavior Survey (YRBS) asked Nebraska youth if they have felt sad or hopeless almost every day for two or more weeks in a row, enough that they stopped doing some usual activities during the 12 months before the survey.

#### Youth sad/hopeless indicator summary

Indicator	Data Source	Year	Nebraska	Estimated Persons	Nation	Nebraska vs. Nation	Trend
Youth who reported feeling sad or hopeless in past year among youth grades 9-12	YRBS	2015	24.1%	24,000	29.9%	Lower	Stable

#### Youth sad/hopeless in Nebraska

In 2015, approximately 1 in every 4 Nebraska high school students (24.1 percent), an estimated 24,000 youth, reported feeling sad or hopeless for at least two weeks in a row sometime in the past year.

#### Compared to the nation

In 2015, the percentage of Nebraska high school youth reporting feeling sad or hopeless for at least two weeks in a row at some point in the past year (24.1 percent) was significantly lower than the U.S. overall (29.9 percent).

#### Trends

There was little change from 2005 (25.1 percent) to 2015 (24.1 percent) in the proportion of Nebraska youth who reported feeling sad or hopeless for at least two weeks in a row during the past year.

### Youth Depression and Psychological Distress: Youth Sad/Hopeless by Demographics

#### Differences by grade

Overall, the rates are very similar by grade with no significant differences.

#### Differences by gender

Females are significantly more likely (31.4 percent) to indicate having felt sad or hopeless than males in 2013 (17.1 percent).



## Adult Inclination Toward Suicide

### ***Adult Suicide: Serious Thoughts of Suicide***

In addition to questions on mental health, the NSDUH asked respondents about suicide. The NSDUH asked respondents if they have had serious thoughts of suicide in the past year, which helps us to inform about the potential for suicide among adults in Nebraska.

#### *Serious thoughts of suicide indicator summary*

Indicator	Data Source	Year	Nebraska	Estimated Persons	Nation	Nebraska vs. Nation	Trend
Adults with serious thoughts of suicide in past year among adults 18 and older	NSDUH	2014-15	4.2%	59,000	4.0%	Non-significant	Stable

#### *Serious thoughts of suicide in Nebraska*

During the combined years of 2014 and 2015, approximately 1 in every 24 Nebraska adults, ages 18 and older (4.2 percent), an estimated 59,000 Nebraskans, reported having serious thoughts of suicide in the past year.

#### *Compared to the nation*

During the combined years of 2014 and 2015, the percentage of Nebraskans age 18 and older reporting serious thoughts of suicide (4.2 percent) was very similar to the U.S. overall (4.0 percent).

#### *Trends*

Since 2008-09, there has been no significant change in the percentage of Nebraskans who report serious thoughts of suicide in the past year. In 2008-09, 3.9 percent of Nebraskans reported having serious thoughts of suicide and in 2014-15, 4.2 percent of Nebraskans reported the same. There is no statistically significant difference.

### ***Adult Suicide: Serious Thoughts of Suicide by Age***

Overall, 18-25 year olds (8.3 percent) report significantly higher levels of serious thoughts of suicide compared to those who are ages 26 and older (3.5 percent).

- In Nebraska, 8.3 percent of 18-25 year olds report past year serious thoughts of suicide. Nationally, 7.9 percent of U.S. residents reported past year serious thoughts of suicide. The difference is not statistically significant.
- For those ages 26 and older 3.5 percent of Nebraskans reported past year serious thoughts of suicide while nationally 3.3 percent of adults 26 and older reported past year serious thoughts of suicide. The difference is also not statistically significant.

## Youth Inclination Toward Suicide

### *Youth Suicide: Seriously Consider Suicide*

The Youth Risk Behavior Survey (YRBS) asked Nebraska youth if they have seriously considered attempting suicide in the past year.

#### *Youth seriously consider suicide indicator summary*

Indicator	Data Source	Year	Nebraska	Estimated Persons	Nation	Nebraska vs. Nation	Trend
Youth who reported seriously considering attempting suicide in past year among youth grades 9-12	YRBS	2015	14.6%	15,000	17.7%	Lower	Stable

#### *Youth seriously consider suicide in Nebraska*

In 2015, approximately one in every seven Nebraska high school youth (14.6 percent), an estimated 15,000 youth, reported seriously considering committing suicide in the past year.

#### *Compared to the nation*

In 2015, the percentage of Nebraska high school youth who reported seriously considering suicide in the past year (14.6 percent) was significantly lower than the U.S. overall (17.7 percent).

#### *Trends*

There was little change from 2005 (16.5 percent) to 2015 (14.6 percent) in the proportion of Nebraska youth who reported seriously considering attempting suicide.

### *Youth Suicide: Serious Thoughts of Suicide by Demographics*

#### *Differences by grade*

Overall, the rates are very similar by grade. Ninth grade students have slightly lower rates than 10<sup>th</sup> and 11<sup>th</sup> grade students but the difference was not significant.

#### *Differences by gender*

Females are significantly more likely (18.0 percent) to indicate having seriously considered attempting suicide than males in 2015 (11.3 percent).

### ***Youth Suicide: Made Plan to Commit Suicide***

The Youth Risk Behavior Survey (YRBS) asked Nebraska youth if they made a plan about how they would attempt suicide in the past year.

#### ***Youth who made a plan on how they would complete suicide indicator summary***

Indicator	Data Source	Year	Nebraska	Estimated Persons	Nation	Nebraska vs. Nation	Trend
Youth who reported making a plan on how to commit suicide in past year among youth grades 9-12	YRBS	2015	13.3%	13,000	14.6%	Non-Significant	Stable

#### ***Youth made plan on how to complete suicide in Nebraska***

In 2015, approximately 1 in every 8 Nebraska high school youth (13.3 percent), an estimated 13,000 youth, reported making a plan on how they would complete suicide in the past year.

#### ***Compared to the nation***

In 2015, the percentage of Nebraska high school youth reporting making a plan on how they would complete suicide in the past year (13.3 percent) was similar to the U.S. overall (14.6 percent).

#### ***Trends***

There was little change from 2005 (14.3 percent) to 2015 (13.3 percent) in the proportion of Nebraska youth who reported making a plan about how they would attempt suicide.

### ***Youth Suicide: Made Plan to Commit Suicide by Demographics***

#### ***Differences by grade***

Overall, the rates are very similar by grade. Ninth grade students had a similar rate (10.3 percent) as twelfth graders (11.2 percent)

#### ***Differences by gender***

Females are significantly more likely (17.0 percent) to indicate having made a plan about how they would attempt suicide than males in 2013 (9.8 percent).

### ***Youth Suicide: Attempted Suicide***

The Youth Risk Behavior Survey (YRBS) asked Nebraska youth if they have attempted suicide in the past year.

#### ***Youth attempted suicide indicator summary***

Indicator	Data Source	Year	Nebraska	Estimated Persons	Nation	Nebraska vs. Nation	Trend
Youth who reported attempting suicide in past year among youth Grades 9-12	YRBS	2015	8.9%	9,000	8.6%	Non-Significant	Stable

#### ***Youth attempted suicide in Nebraska***

In 2015, approximately 1 in every 11 Nebraska high school youth (8.9 percent), an estimated 9,000 youth, reported attempting suicide in the past year.

#### ***Compared to the nation***

In 2015, the percentage of Nebraska high school youth who reported a suicide attempt in the past year (8.9 percent) was similar to the U.S. overall (8.6 percent).

#### ***Trends***

There was little significant change from 2005 (9.4 percent) to 2015 (8.9 percent) in the proportion of Nebraska youth who reported attempting suicide.

### ***Youth Suicide: Attempted Suicide by Demographics***

#### ***Differences by grade***

Overall, the rates are very similar by grade. Ninth grade students had a similar rate (6.0 percent) to twelfth graders (8.4 percent)

#### ***Differences by gender***

Similar to other measures of suicide, females are more likely (9.4 percent) to indicate having attempted suicide than males in 2015 (7.7 percent). Unlike other suicide measures, however, the differences were not statistically significant.

### ***Youth Suicide: Attempted Suicide that Resulted in Need for Treatment***

The Youth Risk Behavior Survey (YRBS) asked Nebraska youth if they have attempted suicide that resulted in an injury, poisoning, or overdose that had to be treated by a doctor or nurse in the past year.

#### ***Youth attempted suicide that resulted in need for treatment indicator summary***

Indicator	Data Source	Year	Nebraska	Estimated Persons	Nation	Nebraska vs. Nation	Trend
Youth who reported attempting suicide that resulted in need for treatment in past year among youth grades 9-12	YRBS	2015	3.3%	3,000	2.8%	Non-significant	Stable

#### ***Youth attempted suicide that resulted in need for treatment in Nebraska***

In 2015, approximately 1 in every 30 Nebraska high school youth (3.3 percent), an estimated 3,000 youth, reported attempting suicide in the past year that resulted in the need for treatment.

#### ***Compared to the nation***

In 2015, the percentage of Nebraska high school youth who reported attempting suicide in the past year that resulted in the need for treatment (3.3 percent) was not significantly different than the U.S. overall (2.8 percent).

#### ***Trends***

There was little significant change from 2005 (3.2 percent) to 2015 (3.3 percent) in the proportion of Nebraska youth who reported attempting suicide that resulted in the need to be treated by a medical professional.

### ***Youth Suicide: Attempted Suicide that Resulted in Need for Treatment by Demographics***

#### ***Differences by grade***

Eleventh graders reported the highest rate of needing treatment following a suicide attempt compared to all other graders. Among 11<sup>th</sup> graders, 6.9 percent reported attempting suicide that resulted in need for treatment. This is significantly higher than all the other grades.

#### ***Differences by gender***

Unlike other measures of suicide, males were more likely to report (3.5 percent) attempting suicide that required medical treatment than females (3.0 percent) although the difference was not significant.

## Depression and Psychological Distress: Suicide Mortality

Each year, over 44,000 individuals die by suicide in the U.S., making it the 10<sup>th</sup> leading cause of death<sup>6</sup>. Suicide is a major cause of death in Nebraska. In 2015, suicide was the 11<sup>th</sup> leading cause of death among Nebraskans.

### Suicide mortality indicator summary

Indicator	Data Source	Year	Nebraska AA Rate*	Number of Deaths	National AA Rate*	Nebraska vs. Nation	Trend
Death due to suicide	Vital Records**	2015	11.6	221	13.3	Lower	Stable

\*Age-Adjusted death rate per 100,000 population

\*\*Nebraska data were obtained from Nebraska vital records. U.S. data were obtained from CDC Wonder (on-line)

### Suicide mortality in Nebraska

In 2015, suicide killed 221 Nebraska residents, with an age-adjusted mortality rate of 11.6 deaths per 100,000 population

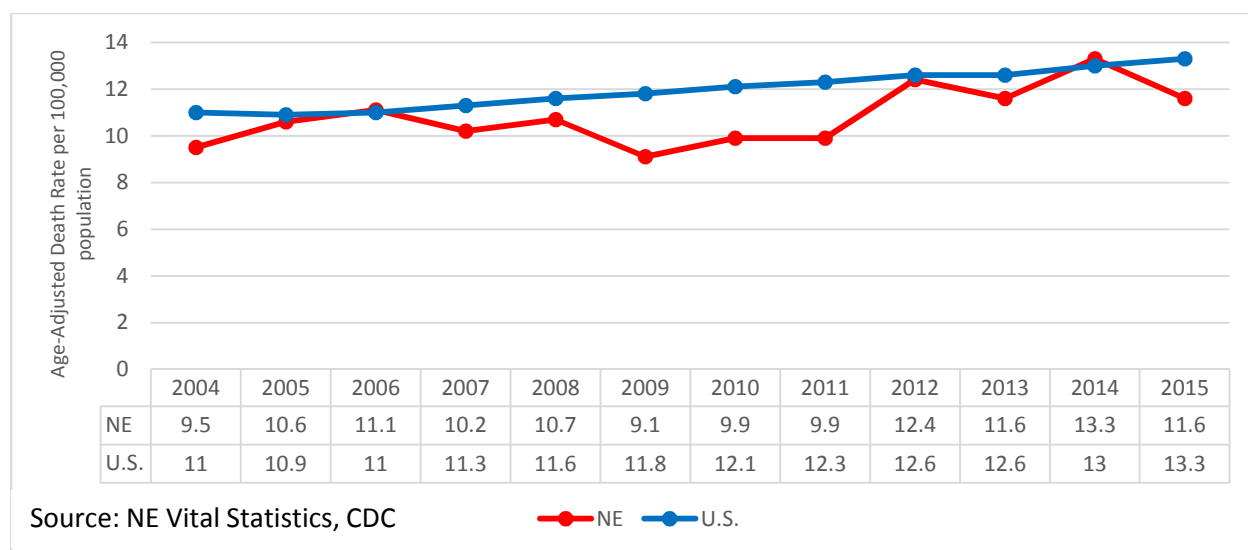
### Compared to the nation

In 2015, Nebraska's age-adjusted mortality rate of 11.6 deaths per 100,000 population is lower than the U.S. rate of 13.3 deaths per 100,000 population.

### Trends

Figure 5.3 shows suicide mortality rates for Nebraska and the U.S. as a whole. Nebraska is slightly lower than the national average; however, in 2012 and 2014 it is almost equal to the national average or slightly higher in the case of 2014.

Figure 5.3 Suicide age-adjusted mortality rate NE vs U.S. (2004-2015)

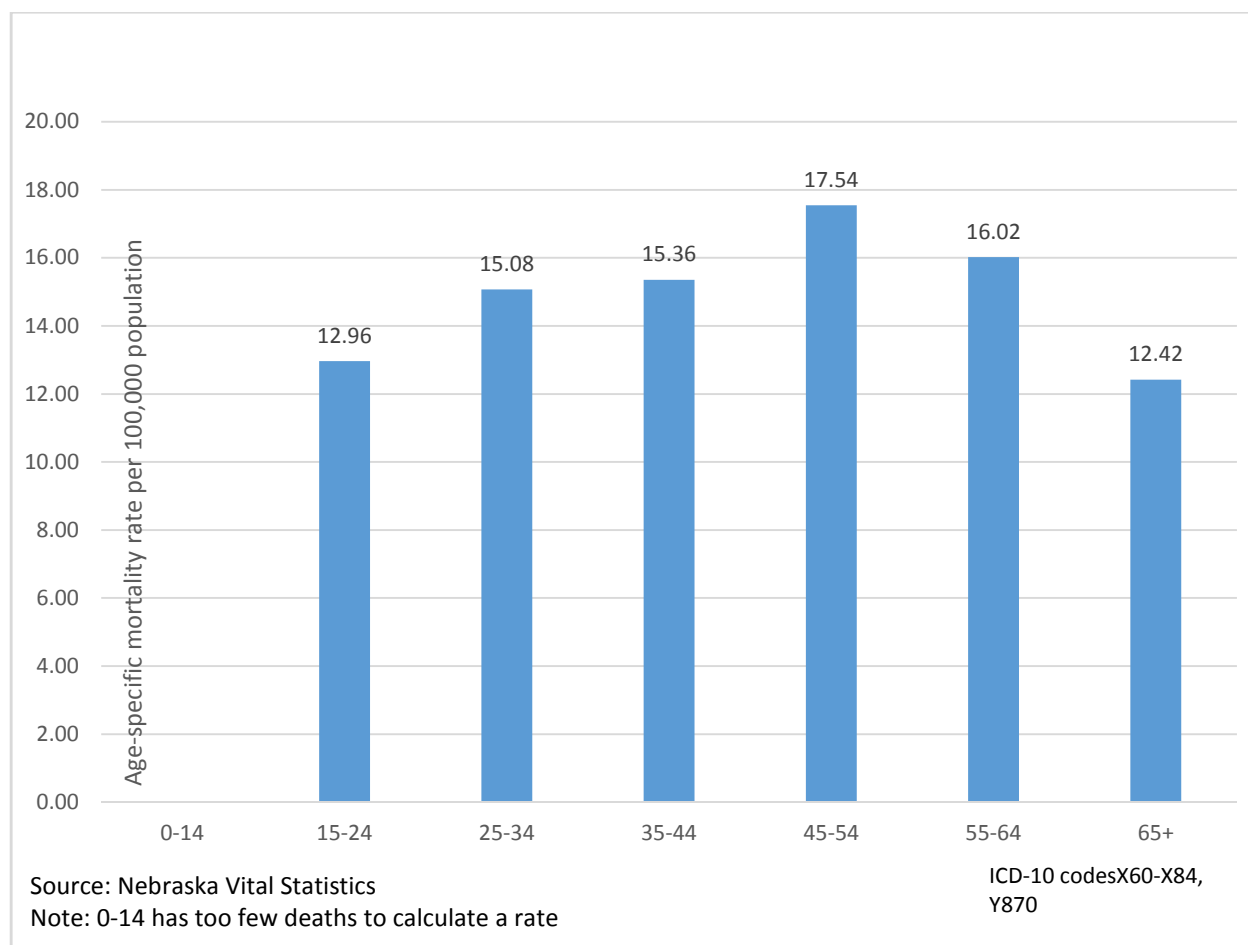


## ***Depression and Psychological Distress: Suicides by Demographics***

### ***Differences by age***

Figure 5.4 shows the age-specific rate of suicide deaths in Nebraska by age group from 2011 to 2015. The age group with the highest rate of deaths is 45 to 54 year olds followed by 55 to 64 year olds. Suicide death rates rise with age, reaching the highest rate (17.54) for those 45-54 then decline for older age groups.

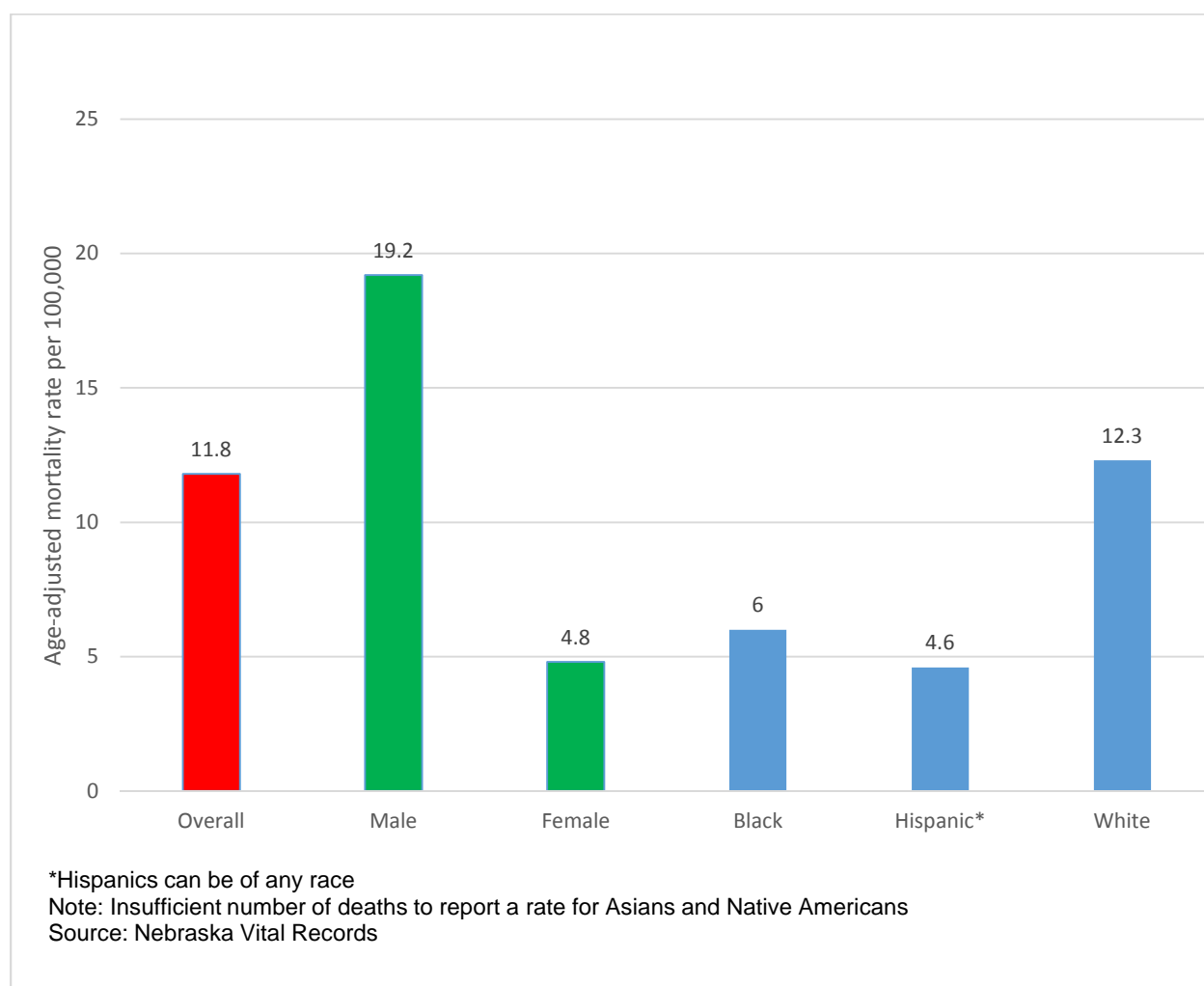
**Figure 5.4 Rate of suicide deaths in Nebraska, by age group, (2011-2015)**



### *Differences by gender*

Figure 5.5 shows the rate of suicides by race, ethnicity, and gender. Males have a much higher suicide rate compared to females with a rate of over four times that of females between 2011 and 2015.

Figure 5.5 Mortality rates of suicide by race, ethnicity and gender (2011-2015)



### *Differences by urban/rural*

Between 2011 and 2015, rural counties has the highest rate (14.1) of suicides, while urban small had the next highest rate (12.9) and urban large counties had the lowest (10.8).

### *Differences by race/ethnicity*

Whites have the highest rate of suicide among racial/ethnic groups from 2011 to 2015.



## Emergency Department Self-Harm Hospitalizations

In 2014, there were 399 emergency department (ED) hospitalizations in Nebraska, in which self-harm was listed as the primary reason for the hospitalization (Table 5.3).

Table 5.3: Emergency department visits in Nebraska due to self-harm, by age and gender (2014)

	Number	Percent
Total	399	
<b>Gender</b>		
Male	143	35.8%
Female	256	64.2%
<b>Age</b>		
0-9	0	0.0%
10-24	202	50.6%
25-44	145	36.3%
45-64	45	11.3%
65+	7	1.8%

\*Includes emergency department visits in which self-harm is listed as the primary cause for the visit  
Source: Nebraska Hospital Discharge Data

### *Emergency Department Self-Harm Hospitalizations by Demographics*

#### *Differences by age*

In 2014, half (50.6 percent) of ED hospitalizations for self-harm were for those 10-24 years old. About 1 in 3 (36.3 percent) were for those 25-44 years old.

#### *Differences by gender*

In 2014, a majority (64.2 percent) of ED hospitalizations were for females, with one-third (35.8 percent) for males.

#### *Differences by urban/rural*

In 2014, residents of urban large counties had the most emergency department hospitalizations (256). Residents of rural counties reported the least (61) while urban small counties had 82 hospitalizations. When reviewing by rate per 10,000 residents, the differences are much smaller. Both urban large and urban small had 2.3 hospitalizations per 10,000 while rural counties had 1.6 hospitalizations per 10,000.

## ***Mental Illness and Children Removed from Home***

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The Foster Care Review Office (FCRO) reviews all cases of children who are state wards in out-of-home-care. In their review, some of children were removed due to substance use including alcohol use.

Nearly 1 in 10 (9.1 percent) of children involved in adjudication or court involvement and intervention in out-of-home care were placed there due to parental mental illness.

In addition, based on case file reviews that were conducted by the FCRO, among 37 percent of children reviewed, there was indication of additional reasons for removal that were not included in the case. Some of these issues may be recognized at the beginning of the case, but for various reasons, they may not be included in the adjudication. Other issues may be discovered later in the case. If the root issues are not adequately addressed, it may be unsafe for the child to return to their home.

Among those cases reviewed in which there was an additional non-adjudicated reason for child removal, 1 in 5 (19.2 percent) indicated mental illness of parent as a concern that should still be addressed.

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5. Office of Disease Prevention and Health Promotion. Health People 2020. Retrieved May 19, 2017 from <http://www.healthypeople.gov/2020/topics-objectives/topic/mental-health-and-mental-disorders>
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## Methodology

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### *Data sources used in this report*

To gain a comprehensive understanding of substance use and associated consequences in Nebraska, 19 data sources were included in this report. The following is a brief summary of each of the 19 data sources as well as contact information that can be used to gather further information.

#### *Alcohol-related motor vehicle crash data/Nebraska Department of Roads*

<http://www.dor.state.ne.us/nohs>

The Highway Safety Office of the Nebraska Department of Transportation collects, analyzes, and publishes information about crashes that occur on Nebraska roadways. These data are then made available to the public. For these data, a crash is considered alcohol-related if either driver and/or a non-occupant (such as a pedestrian or pedal-cyclist) had any alcohol in their system at the time of the crash. As a result, these data do not conclude that alcohol contributed to the crash but rather that alcohol was present at the time of the crash.

#### *Alcohol sales/National Institute for Alcohol Abuse and Alcoholism*

<http://www.niaaa.nih.gov>

For this report, data on alcohol sales for the state of Nebraska were obtained from the National Institute for Alcohol Abuse and Alcoholism (NIAAA). The NIAAA collects and reports data on alcohol sales at the wholesale level annually for all U.S. States and the District of Columbia. Available through this reporting is the total number of gallons of alcoholic beverages sold, the total number of gallons of ethanol (or pure alcohol) sold, and per capita ethanol sales for persons 14 and older. Each of these measures is available for alcoholic beverages overall as well as for beer, wine, and liquor individually.

Nebraska data from the NIAAA reports is obtained from the Nebraska Liquor Control Commission (LCC). Using alcohol tax information, the Nebraska LCC compiles

#### *Behavioral Risk Factor Surveillance System/Division of Public Health/NDHHS*

<http://www.cdc.gov/brfss>

The Behavioral Risk Factor Surveillance System (BRFSS) is a cross-sectional random digit dialed telephone survey of Nebraska adults 18 years of age and older. It is conducted in all 50 states, the District of Columbia, and three U.S. territories. The BRFSS is developed each year by the CDC and administered by the NDHHS. Nebraska began conducting the BRFSS in 1982, and since has conducted the survey on an ongoing annual basis. The Nebraska BRFSS is designed to collect information on the health behaviors of adults related to the major causes of morbidity and mortality in the state. To better reflect the Nebraska adult population, data are weighted by age and gender.

This report contains data on self-reported alcohol use, alcohol-impaired driving, cigarette smoking, and smokeless tobacco use collected between 1989 and 2016. Data on illicit drug use are not collected by the BRFSS.

### ***Cigarette sales/Nebraska Department of Revenue***

<http://www.revenue.ne.gov>

The Nebraska Department of Revenue collects taxes from the sale of cigarettes at the wholesale level. As a result, information is available on the number of packs of cigarettes sold at the wholesale level each year in Nebraska. To allow for state-to-state and national comparisons, the economic consulting firm of Orzechowski and Walker produces an annual report entitled "*The Tax Burden on Tobacco*." This report, which is funded by the tobacco industry, is the nation's definitive source on tobacco tax information.

### ***Drug recognition expert data/Nebraska Office of Highway Safety***

In 1991, the Nebraska Office of Highway Safety began sponsoring the Drug Evaluation and Classification program for Nebraska law enforcement officers. The program provides the necessary training to law enforcement officers to become DREs. The program is federally funded through the Nebraska Office of Highway Safety. DREs are specially trained to identify drivers who may be impaired by non-alcoholic substances. Suspected drivers are put through a 12-step evaluation to determine impairment. If the suspect is impaired, the results of the 12-step evaluation provide the information to determine what drug category is causing the impairment. During the 12-step evaluation a toxicology sample is provided (unless refused) to support the DRE's opinion.

When evaluating subjects, DREs look for signs of impairment that may have resulted from any non-alcoholic substance, legal or illegal. As a result, it is possible that a driver may be cited for DUI resulting from prescription drug impairment. Once cited, drivers are sent through the legal system in a similar manner to if they had been cited for DUI resulting from alcohol impairment.

### ***Fatality Analysis Reporting System/National Highway Traffic Safety Administration***

<http://www.fars.nhtsa.gov/>

In 1975, the United States Department of Transportation, National Highway Traffic Safety Administration (NHTSA) created the Fatality Analysis Reporting System (FARS) to improve traffic safety. Fatality information derived from FARS includes motor vehicle traffic crashes that result in the death of an occupant of a vehicle or a non-motorist (such as a pedestrian or pedal-cyclist) within 30 days of the crash. FARS contains data on all fatal traffic crashes within the 50 states, the District of Columbia, and Puerto Rico. The Nebraska Department of Roads provides the NHTSA with information on fatal crashes in Nebraska using state data that are coded onto a standard FARS form.

### ***Foster Care Review Office***

<http://www.fcro.nebraska.gov/>

The Foster Care Review Office (FCRO) was established as an independent agency to review the case plans of children in foster care. The purpose of these reviews are to assure that appropriate goals have been set for the child, that realistic time limits have been set for the child, that realistic time limits have been set for the accomplishment of these goals, that efforts are being made by all parties to achieve these goals, that appropriate services are being delivered to the child and/or his or her family, and that long-range planning has been done to move the child to a permanent home where he or she can grow and thrive.

Each year the FCRO releases a report describing its findings for the year. The latest annual report released is for 2016.

### ***Incarceration and parole data/Nebraska Department of Correctional Services***

<http://www.corrections.state.ne.us>

The Nebraska Department of Correctional Services collects data on adult men and women who are incarcerated within the Nebraska prison system, as well as juveniles who are incarcerated as adults.

For these data, incarceration refers to an individual being sentenced to prison for one year or longer and does not count individuals sentenced to jail or held in jail for less than one year. In addition, data on parole are available. For these data, parole refers to the supervised release of a prisoner before the completion of his or her prison sentence.

Parole should not be confused with probation, which refers to the supervision of criminals who were not sentenced to serve jail or prison time.

For this report, data on incarceration and parole for drug and DUI offenses were reported. Drug offenses consist of illegal drug possession, manufacturing, sales, or the intent to sell drugs illegally. It should be noted that data are only available on the most serious offense committed by each inmate. Other crimes may have been committed during or prior to a drug or DUI offense that may have had an impact on the sentence.

### ***Centralized Data System/Division of Behavioral Health/NDHHS***

The Division of Behavioral Health (DBH) of the NDHHS collects data on alcohol and drug treatment admissions from programs funded through the DBH as well as programs not funded through the DBH, but who choose to submit their patient data to the state. Data are collected using Nebraska's Centralized Data System software. This data set contains admissions for individuals receiving substance use treatment, mental health treatment, or both. The data sets were run on March 31, 2017 for calendar year 2016 data.

### ***Mortality data/Nebraska Vital Records/Division of Public Health/NDHHS***

Mortality (death) data in Nebraska is collected annually from individual death certificates filed with the NDHHS. These data include information on a variety of attributes of the deceased, including age, race/ethnicity, gender, place of residence, and primary and secondary causes of death.

Mortality data used in this report were from years 1999-2015 and were coded using the 10th revision of the International Classification of Disease (ICD-10), the source for coding mortality data by cause of death. For more information on ICD-10, including cause of death codes, visit the National Center for Health Statistics website at <http://www.cdc.gov/nchs/about/major/dvs/icd10des.htm>

In contrast to many of the traditional causes of death, such as heart disease and cancer, deaths involving substance use are less clear and often require estimation. Some deaths result directly from alcohol and drug use (e.g., alcohol or drug poisoning) and are codeable on the death certificate while others result from causes in which alcohol, tobacco, or drug use are simply contributing factors to the death and subsequently are not codeable on the death certificate.

To better understand the influence of alcohol and tobacco use on mortality, the CDC established methodology to estimate the number of alcohol and tobacco-related deaths. To do this, alcohol and tobacco-attributable fractions were established. These fractions can be applied to certain causes of death (coded on the death certificate) to generate estimates of the number of deaths. Estimates of the number of alcohol-related deaths presented in this report were calculated using the CDC's ARDI software while the number of smoking-related deaths was calculated using fractions obtained from the CDC's SAMMEC methodology.

Estimates for the number of drug-related deaths used in this report were obtained from the Pacific Institute for Research and Evaluation. However, it should be noted that drug-attributable fractions are less advanced than those for alcohol and tobacco and likely under-estimate the actual number of drug-related deaths. As a result, the primary focus of this report was on deaths that were directly attributable to drug use. Drug-overdose ICD-10 death codes used in this report included: X40-X44; X60-X64, X85; Y10-Y14.

In addition to looking specifically at deaths resulting from alcohol, tobacco, and drug use, data on deaths resulting from suicide, and chronic liver disease were presented using the following ICD-10 codes:

- Suicide: X60-X84; Y87.0
- Chronic Liver Disease: K70, K73-74

### ***National Survey on Drug Use and Health/Substance Abuse and Mental Health Services Administration (SAMHSA)***

<http://www.oas.samhsa.gov/nhsda.htm>

Sponsored by SAMHSA, the National Survey on Drug Use and Health (NSDUH) is an annual survey of the civilian, non-institutionalized population of the United States aged 12 years and older. Data is collected from all U.S. states and the District of Columbia through a face-to-face survey at the respondents' place of residence. To increase confidentiality, the survey is administered using computer-assisted interviewing methods, including the use of a portable computer and headphones for self-interviewing.

Due to the limited number of respondents and complexity of analysis, most data is only available for select demographics at the state level, including an overall estimate and estimates for 12-17 year olds, 18-25 year olds, and persons 26 and older. The survey is stratified by these three age categories to allow for representative data on youth, young adults, and adults. In addition to these three age categories, a limited amount of information is available for alcohol use among persons 12-20 (those under the legal drinking age) as well as alcohol, tobacco, and drug use by Nebraska behavioral health region. Estimates for other age groups and regions as well as by gender, race/ethnicity, and other demographics are not available at the state level.

While SAMHSA publications included 95 percent confidence interval bands for Nebraska estimates (both for overall and age-specific estimates), confidence interval bands were not presented for national estimates. As a result, differences were determined to be significant when the confidence interval for Nebraska did not contain the national estimate.

### ***Nebraska hospital discharge data/Division of Public Health/NDHHS***

Information on each hospital discharge is reported from acute care hospitals in Nebraska to the Nebraska Hospital Association (NHA). This information is reported by hospitals using the Uniform Billing Form (UB-92) and is transmitted electronically to the Nebraska Hospital



Information System (NHIS) at the Nebraska Association of Hospitals and Health Systems (NAHHS). Ultimately the information is acquired by the NDHHS from NHA. For more information on the Nebraska Hospital Association visit <http://www.nhanet.org>.

Hospital discharge records contain information on the date of admission, date of discharge, patient's age, gender, county of residence, and primary and secondary diagnoses. A total of 25 diagnoses codes can be recorded during each hospitalization, with one listed as the primary diagnosis (or underlying cause) for the hospitalization and nine listed as secondary diagnoses (or contributing factors) to the hospitalization, including E-codes (external causes of injury). Information is not available on the race or ethnicity of the patient.

In contrast to the ICD-10 coding system used for coding and analyzing mortality data, hospital discharge data is coded using the clinical modification of the 9th revision of the international classification of disease (ICD-9-CM). As a result, codes used to define alcohol, tobacco, drug and mental illness hospitalization are different than codes used to define death. Beginning in October of 2015 hospitalization data was switched to ICD-10 codes meaning that 2015 includes a mix of ICD-9 and ICD-10 codes.

There are two types of hospital discharge records available in Nebraska, emergency department and inpatient (hereafter hospitalization). Indicators will use inpatient hospitalization unless it specifically mentioned emergency department hospitalizations.

For this report, a hospitalization was counted as alcohol or drug-attributable if an alcohol or drug-attributable code was listed as the primary diagnosis or the secondary diagnosis. While this approach is more comprehensive than looking at just the primary diagnosis, it does not include hospitalizations for which alcohol and drug use are often contributing factors (such as motor vehicle crashes, falls, and other conditions and injuries), but are not alcohol or drug specific. For mental disorders, a hospitalization was counted if a mental disorder code was listed as the primary diagnosis.

- Alcohol-attributable hospitalization codes (ICD-9-CM): 291.0, 291.1, 291.2, 291.3, 291.4, 291.5, 291.8, 291.9, 303 (.00-.93), 305.0, 357.5, 425.5, 535.3, 571.0, 571.1, 571.2, 571.3, 790.3, E860.0, E860.1, E860.2, E860.9
- Drug-attributable hospitalization codes (ICD-9-CM): 292.0, 292.1, 292.2, 292.8, 292.9, 304(.00-.93), 305.2, 305.3, 305.4, 305.5, 305.6, 305.7, 305.8, 305.9, E850, E851, E852, E853, E854, E855, E856, E857, E858, E950.0, E950.1, E950.2, E950.3, E950.4, E950.5, E962.0, E980.0, E980.1, E980.2, E980.3, E980.4, E980.5
- Mental disorders-attributable hospitalization codes (ICD-9-CM): 290-319.
- Mood and depressive disorder-attributable hospitalization codes (ICD-9-CM): 296, 311.
- Schizophrenic disorders-attributable hospitalization codes (ICD-9-CM): 295.
- Mental disorders except drug and alcohol-induced disorders-attributable hospitalization codes (ICD-9-CM): 290,293-302,306-319.

In contrast to alcohol and drugs, hospitalizations resulting (at least in part) from cigarette smoking are not codeable using the ICD-9-CM coding system. As a result, estimates for smoking-related hospitalizations had to be calculated using the CDC's SAMMEC methodology. It should be noted that smoking-attributable fractions within SAMMEC were established for estimating smoking-related deaths among persons 35 and older and not for estimating smoking-related hospitalizations. As a result, these findings should be viewed with caution as they may incorrectly estimate smoking-related hospitalizations among persons 35 and older and do not

estimate smoking-related hospitalizations that may have occurred among persons under 35 years of age. For more information on SAMMEC visit <http://apps.nccd.cdc.gov/sammecc>.

There are three primary limitations of this data. First, the number of records reported annually by acute care hospitals to the NHIS is lower than the number of met records the same hospitals report to the NDHHS, indicating incomplete data. As a result, the available records under represent the actual number of hospitalizations in the state.

The second limitation is that Nebraska residents receiving care outside the state of Nebraska are not included in the database. Since the rate and trend of migration for medical care is unknown, the true number of hospitalizations among Nebraska residents is beyond speculation. Particular caution should be used when comparing hospitalization rates geographically, since residents of some counties may be more likely than residents in other counties to receive their medical care out of state.

The third limitation is that state to state and national comparisons are not available due to differences in how states collect, define, and report hospital discharge data. As a result, national comparison data are not included in this report.

For more information on Nebraska Hospital Discharge Data, contact the Nebraska Office of Health Statistics at (402) 471-1370.

### ***Nebraska Trauma Registry/Division of Public Health/NDHHS***

The Nebraska Statewide Trauma System (NSTS) is a network of definitive care facilities that provides a spectrum of care for all injured patients. Divided into four statewide regions, the NSTS strives to include all the components of optimal trauma care, such as prevention, education, communication, access and definitive care, rehabilitation, and research activities. Essential to the development of a trauma care system is the designation of definitive trauma care facilities (or trauma centers).

The Nebraska Trauma Registry (NTR), established in September of 2003, is a database that contains detailed information about each trauma patient in Nebraska. The trauma registry includes several types of data regarding patient demographic information, patient insurance category, injury, pre-hospital activity (emergency medical services), the referring hospital, the receiving hospital, and the rehabilitation center.

Currently, seven leading trauma centers in Nebraska participate in the NTR by submitting data to the NDHHS using National Trauma Registry of the American College of Surgeons (NTRACS) software. Patients receiving care through Nebraska trauma centers are tested at the discretion of each trauma center for alcohol and drugs at the time of admission. Screening for alcohol use includes blood alcohol content (BAC) while screening for drug use covers a variety of drugs commonly used for non-medical purposes. However, due to the selective testing procedures used by hospitals, it is likely that some individuals with alcohol and drugs in their system were not tested as a result of failing to show visible signs of impairment.

Prescription drugs and drugs being administered to patients during their hospital stay are not supposed to be entered as positive in the trauma registry, thus having the data reflect only non-medical drug use. However, it was suspected that some facilities were entering all positive drug screening results into the registry, regardless of whether or not the patient was taking them for medical reasons. As a result, this report contains only drug test results for marijuana, cocaine,



and amphetamine/methamphetamine because they are rarely prescribed but commonly used illegally. Amphetamine and methamphetamine could not be separated from one another because centers collect and report this information differently. It is possible that some amphetamine use was prescribed.

### ***Nebraska Young Adult Alcohol Opinion Survey/NDHHS***

The Nebraska Young Adult Alcohol Opinion Survey (NYAAOS) is a survey of Nebraska young adults ages 19 to 25 years old that is conducted by the Nebraska Department of Health and Human Services in partnership with Highway Safety. The survey was first administered in 2010, and has since been administered in 2012, 2013 and 2016.

The primary purposes of the survey were (1) to enhance understanding of alcohol use, alcohol-impaired driving, and attitudes and perceptions related to alcohol among 19 to 25 year old young adults in Nebraska and (2) to provide data to community coalitions in Nebraska working to reduce binge drinking among young adults. This report focuses on state level findings from the survey, including differences by gender, age, urbanicity, student status, and survey administration.

The sample for the most recent survey (2016) was generated from a list provided by the Nebraska Department of Motor Vehicles (DMV). The sampling frame included young adults, ages 19 to 25, with Nebraska driver's licenses. A total of 12,639 young adults were included in the sample.

The sample was stratified in two ways. First, each of the 11 counties that are part of the Strategic Prevention Framework Partnerships for Success (SPF-PFS) grant to reduce underage drinking counties was designated as its own stratum. Then, in each Behavioral Health Region, the remaining counties for the behavioral health region made up an addition stratum. In doing so, there were 17 strata; 11 for the PFS counties and six for the remaining counties in each behavioral health region. Strata were sampled at differing rates to take into account the number of returns needed for each PFS county, and the population size of each stratum. Due to the small population a census was taken of young adults for Boyd County and Thurston County. Before the first mailing, respondent mailing addresses were run through the National Change of Address Registry. This process revealed that 276 respondents were no longer living in Nebraska, so they were removed from the sample. The second full mailing went through the same process and revealed an additional 83 respondents who were no longer living in the state. The survey asked respondents about lifetime and current alcohol use along with frequency of alcohol use which was used to determine binge drinking frequency. In addition questions were asked about the perception of risk from binge drinking along with social norms regarding alcohol use. Finally there were questions related to the attitudes, perceptions and experiences related to alcohol service and sales along with attitudes and alcohol enforcement and perceptions about providing alcohol to minors.

For more information on the NYAAOS contact the Division of Behavioral Health at 471-7736.

### ***Pregnancy Risk Assessment Monitoring System (PRAMS)/Division of Public Health/DHHS***

<http://www.cdc.gov/prams>

The PRAMS is a surveillance system sponsored by the CDC and state health departments of participating states. It collects state-specific, population-based survey data on maternal attitudes and behaviors before, during, and after pregnancy. PRAMS samples women who have recently

had a live birth. The sample is drawn from the state's birth certificate file and does not include non-resident births. Nebraska PRAMS has a relationship with surrounding states, particularly Iowa and South Dakota, to obtain the birth certificates of Nebraska residents who give birth in their state. Nebraska stratifies its sample by race so that some groups are sampled at a higher rate to ensure adequate data in smaller and/or higher risk populations. Selected women are first contacted by mail and if there is no response to the mailings, the women are contacted by telephone.

### ***Probation data/Nebraska Office of Probation Administration***

<http://supremecourt.ne.gov/probation>

The Nebraska Supreme Court Office of Probation Administration provides central management of probation services for the state of Nebraska. For this data, probation refers to the supervision of criminals who were sentenced to a term of probation. Probation should not be confused with parole, which refers to the supervised release of a prisoner before the completion of his or her prison sentence.

For this report, information on probation sentences for DUI and drug offenses was obtained directly from the Nebraska Office of Probation Administration. It is possible that persons were placed on probation for alcohol-related crimes other than DUI; however, these were not examined or included in this report. These data represent only persons sentenced or placed on probation, and does not include persons placed into diversion, court probation, or other programs.

### ***Substance use cost calculator for employers***

<https://www.nsc.org/forms/substance-use-employer-calculator/index.aspx>

The Substance Use Calculator for Business was designed by NORC at the University of Chicago, the National Safety Council, and Shatterproof, a national nonprofit focused on ending addiction, as an authoritative, easy to use tool to provide business leaders with specific information about how alcohol, prescription pain medication misuse and illicit drug use impacts their workplaces.

To create the cost calculator, three years of data from the National Survey of Drug Use and Health (2012-2014) were used as the primary sources for the calculator. All respondents who reported being employed full or part time were included in their analysis. Additional information on the specifics of indicator calculations can be found at

[https://www.shatterproof.org/sites/default/files/2017-03/A-Substance-Use-Cost-Calculator-For-Employers-Methodology\\_0.pdf](https://www.shatterproof.org/sites/default/files/2017-03/A-Substance-Use-Cost-Calculator-For-Employers-Methodology_0.pdf)

### ***Uniform Crime Reporting/Nebraska Crime Commission***

<http://www.ncc.state.ne.us/index.htm>

The Uniform Crime Reporting (UCR) Program is a national data system administered by the Federal Bureau of Investigation (FBI). This system ensures that crime statistics on arrests are collected and reported in a consistent manner across the country and produces a reliable set of crime statistics for use in law enforcement administration, operation, and management.

In Nebraska, law enforcement agencies report arrest data either in the UCR format or the Nebraska Incident-Based Reporting System (NIBRS) format to the Nebraska Crime Commission. Once obtained, NIBRS data is converted to the UCR format to allow for statewide

publication and reporting to the FBI. An arrest is counted each time a person is taken into custody or issued a citation or summons. In the case of a juvenile (defined as under the age of 18) an arrest is counted when they are merely warned and released without any further action. While an individual may be charged with multiple crimes at the time of arrest, only one arrest is counted. An arrest is counted for the most serious charge at the time of the arrest.

### **Youth Risk Behavior Survey/Division of Public Health/NDHHS**

The Youth Risk Behavior Survey (YRBS) is part of the National Youth Risk Behavioral Surveillance System that was established by the CDC. The focus of the YRBS is on priority health-risk behaviors (those health-risk behaviors that are established during youth and result in the most significant mortality, morbidity, disability, and social problems during both youth and adulthood).

Nebraska began conducting the YRBS in 1991, and has conducted it every odd calendar year until 2010, when administration on even years began. This surveillance system targets youth enrolled in grades 9-12 attending public schools in Nebraska. Data are collected by having students complete paper surveys in Nebraska schools that were selected through a 3-stage cluster sampling design.

Data from the 1991, 1993, 2003, 2005, 2011, 2013 and 2015 YRBS survey are considered representative of the target population and are subsequently weighted to reflect the 9-12 grade public school student population in Nebraska. Due to an insufficient response rate on the 1995, 1997, 1999, and 2001 surveys, data were not weighted and as a result, are not generalizable to the population (according to the CDC's criteria).

Beyond the standard limitations of self-report surveys, some limitations exist specifically for the YRBS.

- Data is only collected from public school students. Although public school students made up approximately 90 percent of the states 9-12 grade student population in 2011, it is not known how health behaviors differ between public and non-public high school students in Nebraska.
- Data is not collected for high school age youth who have dropped out of school. It is likely that these youth have different health behaviors, especially for substance use.

To generate estimates for the number of high school students who use alcohol, tobacco, and illicit drugs in the state, we used the entire statewide population ages 15-18 as the denominator.

### **Age-adjustment**

Age adjustment is a statistical method used to compare risk between populations while controlling for differences in age that may exist between populations. It can be used for comparing two or more populations at one point in time or one population over multiple points in time. Direct age-adjustment, the method used for analysis in this report, consists of applying age specific rates in a population to a standardized age distribution. While age-adjusted rates and percentages are useful for comparing populations, the process modifies the rate/percentage within the population and subsequently should be viewed a relative index rather than actual measure of risk.

For calculating age-adjusted population based rates (such as death rates) 11 age categories are typically used, ranging from under one to 85 and older. Rates in this report were calculated using the 11 age categories when available. However, in some instances data were only available for a smaller number of age categories, and as a result age-adjusted rates were calculated using the categories available. When analyzing BRFSS survey data, five age categories were used, including 18-24, 25-34, 35-44, 45-64, and 65 and older. All age-adjusted rates presented in this report were calculated using the 2010 U.S. standard population.

### **Significance testing**

Unless noted, all statements within this report highlighting differences between groups reflect statistically significant differences where  $p < 0.05$ . Differences between rates and percentages were tested for significance by first calculating 95 percent confidence intervals and then examining them for overlap. Groups that had non-overlapping confidence intervals were concluded to be significantly different from one another.

To calculate proper confidence interval bands for weighted estimates obtained from surveys that used complex sampling designs (such as the BRFSS and YRBS), SAS and SAS-callable SUDAAN were used to calculate proper standard errors and subsequently more accurate confidence intervals. Comparing confidence intervals to identify significant differences tends to be more conservative than other statistical tests such as the chi-square test. For example, when comparing binge drinking by gender for Nebraska high school students in 2005, comparing confidence intervals concludes that the gender difference was non-significant (female estimate of 27.3 percent ranged from 24.7 – 29.9 percent while the male estimate of 32.2 percent ranged from 28.5 – 35.8 percent). However, when administering the Rao-Scott chi-square test the difference was determined to be significant (6.56, 1 df,  $p = 0.0104$ ).

To compare two age-adjusted rates, 95 percent confidence intervals were calculated for each rate and examined for overlap. Non-overlapping confidence intervals signified a significant difference between the two rates. Significance tests were not administered on any group with a less than 20 events or cases (such as deaths, hospitalizations, arrests, etc.). The formula used to calculate 95 percent confidence interval bands for age-adjusted rates is as follows:  $R + (1.96 \times S.E.)$ ; where  $S.E. = R/\sqrt{N}$ ;  $R$ =age-adjusted rate and  $N$ =number of cases.

### **Urban and rural analysis**

Nebraska is a sparsely populated state, with the majority of the population clustered along the eastern edge. For data interpretation purposes, Nebraska's counties were divided into three urban and rural categories. The categories were based on county size within each county and location to other urbanized counties. As a result, these urban/rural categories do not represent conglomerate regions of the state, but rather a mixture of counties throughout the state with similar populations. Urban/rural data are not presented across all data sources included within this report, as county of residence information was not available within some of the data sources.

The three categories include:

**Urban-large:** Core metropolitan counties (Douglas, Sarpy, Lancaster) and Core metropolitan outlying counties (Washington, Saunders, Seward, Cass).

**Urban-small:** Non-core metropolitan counties (Dakota, Hall), Non-core metropolitan outlying counties (Howard, Hamilton, Merrick, Dixon) and micropolitan counties (Scotts Bluff, Lincoln, Dawson, Buffalo, Adams, Madison, Dodge, Platte, Gage)

**Non-urban (“Rural”):** Micropolitan outlying counties (Banner, McPherson, Logan, Gosper, Kearney, Clay, Pierce, Stanton), Non-metro/micro with large town counties (Dawes, Box Butte, Cheyenne, Cherry, Keith, Custer, Red Willow, Phelps, Holt, York, Jefferson, Richardson, Nemaha, Otoe, Saline, Butler, Colfax, Cuming, Wayne), and non-metro/micro with no large towns counties (Sioux, Kimball, Morrill, Sheridan, Garden, Deuel, Grant, Arthur, Perkins, Chase, Dundy, Hooker, Thomas, Hayes, Hitchcock, Frontier, Furnas, Harlan, Keya Paha, Brown, Blaine, Rock, Loup, Boyd, Garfield, Wheeler, Valley, Sherman, Franklin, Greeley, Webster, Nuckolls, Nance, Boone, Antelope, Polk, Fillmore, Thayer, Pawnee, Johnson, Knox, Cedar, Thurston, Burt)

The Council of State and Territorial Epidemiologists published ‘Recommended CSTE Surveillance Indicators for Substance Abuse & Mental Health’ in May of 2016. This document suggested several recommended indicators for substance abuse and mental health. The recommendations are way to provide uniformity in states looking at substance abuse and mental health. The SEOW decided to follow the recommendations provided by the CSTE and several of those recommendations are included in the measures the SEOW chose to include in the Epidemiological Profile.

# List of Acronyms

ARDI – Alcohol-Related Disease Impact

BAC – Blood Alcohol Concentration

BRFSS – Behavioral Risk Factor Surveillance System

CDC – Centers for Disease Control and Prevention

DBH – Division of Behavioral Health

DMV – Department of Motor Vehicles

DRE – Drug Recognition Expert

DUI – Driving Under the Influence

FARS – Fatality Analysis Reporting System

ICD – International Classification of Disease

LCC – Liquor Control Commission

NAHHS – Nebraska Association of Hospitals and Health Systems

DHHS – Department of Health and Human Services

NHTSA – Nebraska Highway Traffic Safety Administration

NIAAA – National Institute for Alcohol Abuse and Alcoholism

NIBRS – Nebraska Incident-Based Reporting System

NRPFSS – Nebraska Risk and Protective Factor Student Survey

NSDUH – National Survey on Drug Use and Health

NSTS – Nebraska Statewide Trauma System

NTR – Nebraska Trauma Registry

NYAAOS – Nebraska Young Adult Alcohol Opinion Survey

PRAMS – Pregnancy Risk Assessment Monitoring System

SAMHSA – Substance Abuse and Mental Health Services Administration

SEOW – Statewide Epidemiology Outcomes Workgroup

SPF SIG – Strategic Prevention Framework State Incentive Grant

SPF PFS – Strategic Prevention Framework Partnerships For Success

UB-92 – Uniform Billing Form 92

UCR – Uniform Crime Reports

YRBS – Youth Risk Behavior Survey

## Data Gaps

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After reviewing the availability of data on substance use and associated consequences in Nebraska, the SEOW began identifying data gaps related to substance use and mental illness within the state. While these discussions will continue to evolve, some of the major data gaps identified by the SEOW include (in no particular order of importance):

- Underrepresentation from specific target groups, including but not limited to, rural communities, racial and ethnic minorities, LGBTQ individuals, individuals of low socioeconomic status, and individuals who are institutionalized (for both crime and mental illness).
- Limited data at the regional, county, and community levels.
- Limited demographic data on self-reported illicit drug use among adults. The National Survey on Drug Use and Health is the only state source containing self-reported data on illicit drug use among adults, and for adults, demographics are limited to two age groups (18-25 and 26 and older).
- Limited surveillance to identify new and emerging drugs (e.g., Nebraska does not have a state-operated medical examiner data system).
- Inconsistent categories for illicit drug type are used across data systems.
- Incomplete hospital discharge data.
- Inconsistent alcohol and drug testing of patients at Nebraska trauma centers.
- Limited data linkage within the legal and health care systems.
- Inconsistent capacity for collecting, analyzing, and utilizing data at the community level.
- Limited data from schools, worksites, health care, and law enforcement regarding substance use prevention efforts within their organizations.
- Inconsistency of reporting alcohol and illicit drug arrests by law enforcement in different communities.
- Inconsistent death certificate reporting for cause of death in different communities.

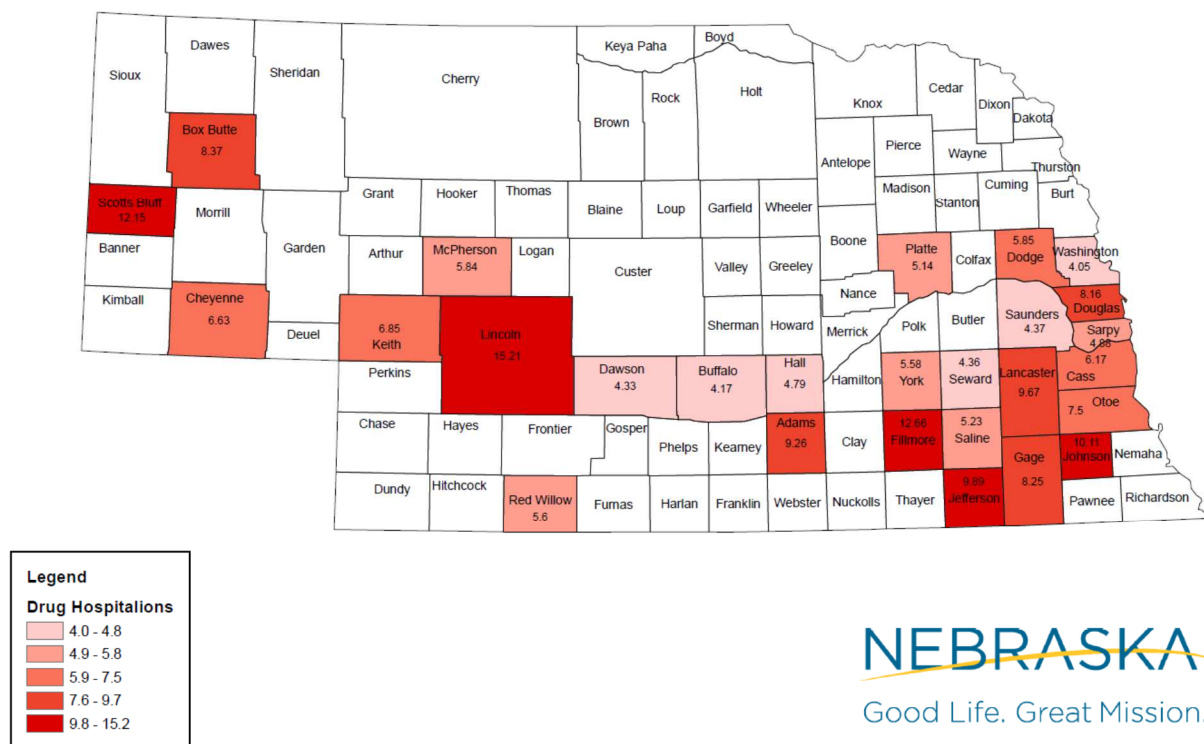


# Appendix A: County-Level Data

## *Inpatient Hospitalization for Drug Use 2013-2015*

Drug-related hospitalizations are highest in the eastern and southeastern portion of the state. There are some counties, such as Lincoln and Scotts Bluff, in the western portion which do, however, show a high level of hospitalization use due to drugs. Most counties had too few hospitalizations to be able to calculate a reliable rate.

Rate of Drug-Related Hospitalizations per 10,000 population, 2013-2015



Note: Counties in white had too few hospitalizations to produce rate

Source: Division of Behavioral Health

Hospitalizations due to mental illness are highest in the southern and eastern portion of the state. Similar to drug-related hospitalizations some western counties, such as Lincoln and Scotts Bluff, in the western portion also show a high level of hospitalization use due to mental illness. Most counties had enough hospitalizations to be able to calculate a reliable rate but some very rural counties did not.

Map of Nebraska showing average annual precipitation in inches by county. The map is color-coded from light pink (lower precipitation) to dark red (higher precipitation).

County	Average Annual Precipitation (inches)
Sioux	51.15
Dawes	51.15
Sheridan	41.53
Cherry	39.58
Keya Paha	19.13
Boyd	41.66
Box Butte	67.68
Scotts Bluff	90.32
Morrill	53.19
Banner	57.41
Garden	48.25
Kimball	57.41
Cheyenne	48.91
Deuel	55.23
Grant	56.26
Hooker	47.65
Thomas	56.26
Blaine	57.51
Loup	57.51
Garfield	48.88
Wheeler	35.39
Custer	57.51
Valley	23.72
Greeley	35.39
Sherman	35.96
Howard	43.6
Dawson	53.66
Buffalo	62.9
Hall	70.32
Adams	112.83
Clay	59.58
Nuckolls	80.82
Thayer	37.51
Jefferson	52.33
Richardson	31.91
Nemaha	44.64
Pawnee	33.14
Johnson	33.27
Gage	64.46
Lancaster	85.2
Cass	76.29
Otoe	53.43
Sarpy	58.05
Douglas	91.1
Saunders	46.78
Butler	34.65
Polk	27.97
York	60.88
Seward	50.75
Fillmore	75.88
Saline	49.59
Hamilton	35.46
Merrick	99.82
Nance	23.65
Boone	17.88
Madison	29.48
Antelope	32.88
Pierce	27.16
Wayne	30.69
Dakota	8.93
Dixon	14.41
Cedar	16.05
Knox	18.91
Rock	19.13
Holt	41.66
Lincoln	127.22
Perkins	40.55
Keith	56.26
Arthur	56.26
McPherson	47.65
Logan	56.26
Washington	42.16
Dodge	52.4
Collins	27.65
Platte	46.54
Stanton	19.18
Cuming	37.06
Burt	57.9
Thurston	30.69



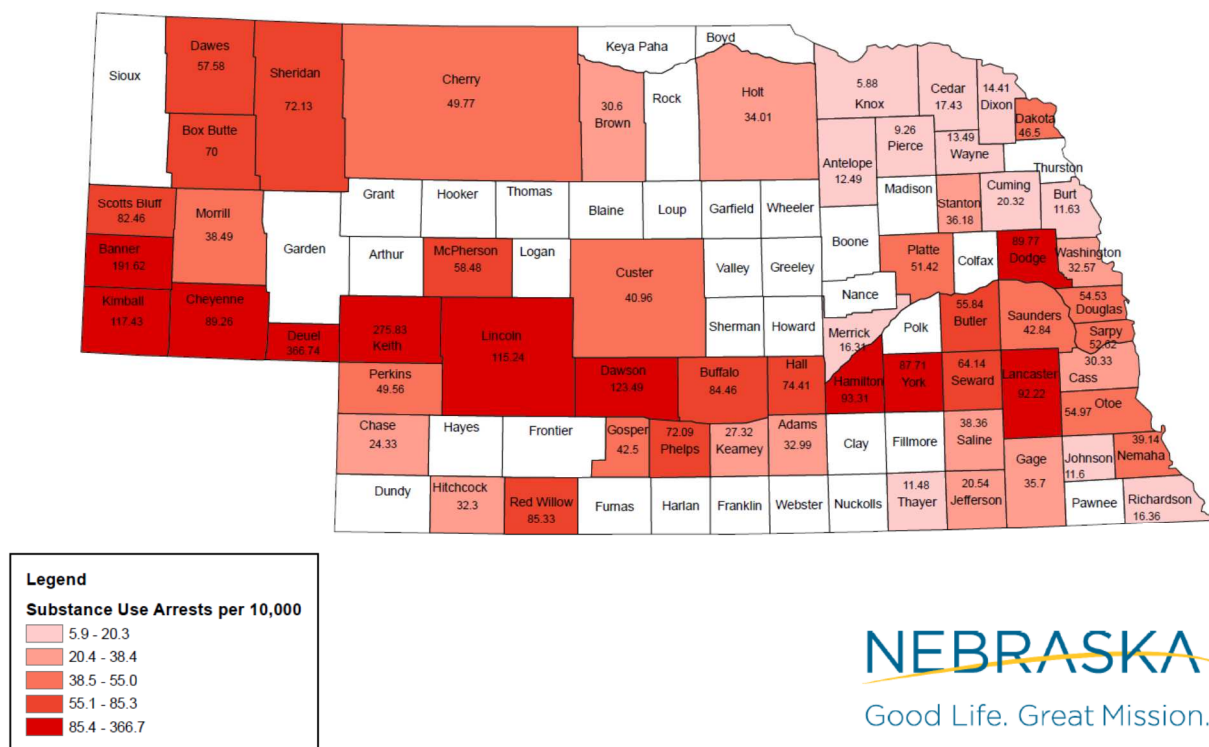
Source: Division of Behavioral Health



## Arrest Rate due to Substance Use 2013-2015

Substance use arrest rates are highest in the central portion of Nebraska. The highest rates tend to follow interstate traffic where many of the arrests are made. Some very rural counties did not have enough arrests to produce a rate and some counties did not report data from police departments which prohibited a reliable rate from being produced.

Rate of Substance Use Arrests per 10,000 population, 2013-2015



Note: Counties in white had too few arrests to produce rate

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DEPT. OF HEALTH AND HUMAN SERVICES

Source: Division of Behavioral Health

## Appendix B: State Epidemiological Outcomes Workgroup Membership

This report was prepared by the Division of Behavioral Health and made possible, in part, by the members of the Nebraska State Epidemiological Outcomes Workgroup (SEOW). Several members provided data from their respective agencies. The current membership of the SEOW, as of December 2017 is presented below:

- ❖ Mike Fargen-Crime Commission
- ❖ Jude Dean-Department of Health and Human Services, Division of Behavioral Health
- ❖ David DeVries-Department of Health and Human Services, Division of Behavioral Health
- ❖ Renee Faber-Department of Health and Human Services, Division of Behavioral Health
- ❖ Marissa Kluk- Department of Health and Human Services, Division of Behavioral Health
- ❖ Nikki Roseberry-Keiser-Department of Health and Human Services, Division of Behavioral Health
- ❖ Debra Sherard-Department of Health and Human Services, Division of Behavioral Health
- ❖ Jeff Armitage-Department of Health and Human Services, Division of Public Health
- ❖ Sandra Gonzalez-Department of Health and Human Services, Division of Public Health
- ❖ Kevin Horne-Department of Health and Human Services, Division of Public Health
- ❖ Amanda Mortensen-Department of Health and Human Services, Division of Public Health
- ❖ Ashley Newmyer-Department of Health and Human Services, Division of Public Health
- ❖ Felicia Quintana-Zinn-Department of Health and Human Services, Division of Public Health
- ❖ Amy Reynoldson-Department of Health and Human Services, Division of Public Health
- ❖ Matt Avery-Lincoln Public Schools
- ❖ Catherine Brown-Nebraska Children & Families Foundation
- ❖ Fred Zwonechek-Nebraska Office of Highway Safety
- ❖ Larry Voegele-Ponca Tribe
- ❖ Brenda McDonald-Region 1 Behavioral Health
- ❖ Shannon Sell-Region 2 Behavioral Health
- ❖ Tiffany Gressley-Region 3 Behavioral Health
- ❖ Ann Koopman-Region 4 Behavioral Health
- ❖ Sandy Morrissey-Region 5 Behavioral Health
- ❖ Crystal Fuller-Region 6 Behavioral Health
- ❖ Will Schmeeckle-Schmeeckle Research
- ❖ Chris Ivory- LMEP SCIP Program
- ❖ Mindy Anderson-Knott-University of Nebraska-Lincoln
- ❖ Kim Meiergerd-University of Nebraska-Lincoln
- ❖ Jennifer Rutt-University of Nebraska-Lincoln
- ❖ Duane Shell-University of Nebraska-Lincoln
- ❖ Lindsey Witt-Swanson-University of Nebraska-Lincoln

## Appendix C: Commonly Used Drug Categories

Substance				
Category and Name	Example of <i>Commercial</i> and (Street Names)	How Drug is Administered	<i>Intoxication Effects</i> / (Potential Health Consequences)	
Cannabinoids				
Hashish	(boom, chronic, gangster, hah, hash oil, hemp)	swallowed, smoked	<i>euphoria, slowed thinking and reaction time, confusion, impaired balance and coordination, cough</i> /(frequent respiratory infections, impaired memory and learning, increased heart rate, anxiety, panic attacks, tolerance, addiction)	
Marijuana	(blunt, dope, ganja, grass, herb, joints, Mary Jane, pot, reefer, sinsemilla, skunk, weed)			
Depressants				
Barbiturates	<i>Amytal, Nembutal, Seconal, Phenobarbital</i> ; (barbs, reds, red birds, phennies, tooies, yellows, yellow jackets)	injected, swallowed	<i>sedation, drowsiness</i> /(depression, unusual excitement, fever, irritability, poor judgment, slurred speech, dizziness, life-threatening withdrawal)	<u>For all Depressants:</u> <i>reduced anxiety, feeling of well-being, lowered inhibitions, slowed pulse and breathing, lowered blood pressure, poor concentration</i> /(fatigue, confusion, impaired coordination, memory, judgment; addiction; respiratory depression and arrest; death)
Benzodiazepines (other than flunitrazepam)	<i>Ativan, Halcion, Librium, Valium, Xanax</i> ; (candy, downers, sleeping pills, tranks)	injected, swallowed	<i>sedation, drowsiness</i> /(dizziness)	
Flunitrazepam	<i>Rohypnal</i> ; (forget-me pill, Mexican Valium, R2 Roche, roofies, roofinol, rope, rophies)	swallowed, snorted	(visual and gastrointestinal disturbances, urinary retention, memory loss for the time under the drug's effects)	
GHB	<i>gamma-hydroxybutyrate</i> ; (G, Georgia home boy, grievous bodily harm, liquid ecstasy)	swallowed	<i>drowsiness, nausea</i> /(vomiting, headache, loss of consciousness, loss of reflexes, seizures, coma, death)	
Methaqualone	<i>Quaalude, Sopor, Parest</i> ; (ludes, mandrex, quad, quay)	injected, swallowed	<i>Euphoria</i> /(depression, poor reflexes, slurred speech, coma)	
Dissociative Anesthetics				
Ketamine	<i>Ketalar SV</i> ; (cat Valiums, K, Special K, vitamin K)	injected, snorted, smoked	(at high doses - delirium, depression, respiratory depression and arrest)	<u>For all DA:</u> increased heart rate and blood pressure, impaired motor function / (memory loss, numbness, nausea)
PCP and analogs	<i>phencyclidine</i> ; (angel dust, boat, hog, love boat, peace pill)	injected, swallowed, smoked	<i>possible decrease in blood pressure and heart rate, panic, aggression, violence</i> /(loss of appetite, depression)	
Hallucinogens				
LSD	<i>lysergic acid diethylamide</i> ; (acid, blotter, boomers, cubes, microdot, yellow sunshines)	swallowed, absorbed through mouth tissue	<i>increased body temp, heart rate, blood pressure; loss of appetite, sleepless-ness, numbness, weakness, tremors, persistent mental disorders</i> (for LSD)	<u>For all Hallucinogens:</u> <i>altered states of perception and feeling; nausea persisting perception disorder</i> (flashbacks)
Mescaline	(buttons, cactus, mesc, peyote)	swallowed, smoked		
Psilocybin	(magic mushroom, purple passion, schrooms)	swallowed	<i>nervousness, paranoia</i>	
Opioids (also referred to as Narcotics)				

Substance	Category and Name	Example of Commercial and (Street Names)	How Drug is Administered	Intoxication Effects / (Potential Health Consequences)
<b>Opiates</b>				
Codeine		<i>Empirin with Codeine, Fiorinal with Codeine, Robitussin A-C, Tylenol with Codeine</i> ; (Captain Cody, Cody, schoolboy; with glutethimide – doors & flours, loads, pancakes and syrup)	injected, swallowed	<i>less analgesia, sedation, and respiratory depression than morphine</i>
Morphine		<i>Roxanol, Duramorph</i> ; (M, Miss Emma, monkey, white stuff)	injected, swallowed, smoked	
Heroin		<i>Diacetylmorphine</i> ; (brown sugar, dope, H, hourse, junk, skag, skunk, smack, white horse)	injected, smoked, snorted	<i>staggering gait</i>
Opium		<i>laudanum, paregoric</i> ; (big O, black stuff, block, gum, hop)	swallowed, smoked	
<b>Semi-synthetic opioids</b>				
Oxycodone HCL		<i>Oxycontin®</i> ; (Oxy, O.C., killer)	swallowed, snorted, injected	
Hydrocodone		<i>Vicodin</i> ; (vike, Watson-387)	swallowed	
<b>Fully-synthetic opioids</b>				
Fentanyl and fentanyl analogs		<i>Actiq, Duragesic, Sublimaze</i> ; (Apache, China girl, China white, dance fever, friend, goodfella, jackpot, TNT, Tango & Cash)	injected, smoked, snorted	
Methadone		<i>Physeptone</i> ; (Meth, Phy)	swallowed, injected	Note: methadone is commonly used for the treatment of heroin addiction
<b>Stimulants</b>				
Amphetamine		<i>Biphetamine, Dexedrine</i> (bennies, black beauties, crosses, hearts, LA turnaround, speed, truck drivers, uppers)	injected, swallowed, smoked, snorted	<i>rapid breathing</i> (tremor, loss of coordination, irritability, anxiousness, restlessness, delirium, panic, paranoia, impulsive behavior, aggressiveness, tolerance, addiction, psychosis)
Cocaine		<i>Cocaine Hydrochloride</i> ; (blow, bump, C, candy, Charlie, coke, crack, flake, rock, snow, toot)	injected, smoked, snorted	<i>increased temperature</i> (chest pain, respiratory failure, nausea, abdominal pain, strokes, seizures, headaches, malnutrition, panic attacks)
MDMA		<i>Methylenedioxy-methamphetamine</i> ; (Adam, clarity, ecstasy, Eve, lover's speed, peace, STP, X, XTC)	swallowed	<i>mild hallucinogenic effects, increased tactile sensitivity, emphatic feelings</i> (impaired memory and learning, hyperthermia, cardiac toxicity, renal failure, liver toxicity)
Methamphetamine		<i>Desoxyn</i> ; (chalk, crank, crystal, fire, glass, go fast, ice, meth, speed)	injected, swallowed, smoked, snorted	<i>aggression, violence, psychotic behavior</i> (memory loss, cardiac and neurological damage, impaired memory and learning, tolerance, addiction)

For all Opioids: pain relief, euphoria, drowsiness/(nausea, constipation, confusion, sedation, respiratory depression and arrest, tolerance, addiction, unconsciousness, coma, death)

For all Stimulants: increased heart rate, blood pressure, metabolism, feelings of exhilaration, energy, increased mental alertness/(rapid or irregular heart beat; reduced appetite, weight loss, heart failure, nervousness, insomnia)



Substance			
Category and Name	Example of <i>Commercial</i> and (Street Names)	How Drug is Administered	Intoxication Effects / (Potential Health Consequences)
Methylphenidate	<i>Ritalin</i> ; (JIF, MPH, R-ball, Skippy, the smart drug, vitamin R)	injected, swallowed, snorted	Note: safe and effective for treatment of ADHD
Other Compounds			
Anabolic Steroids	<i>Anadrol, Oxandrin, Durabolin, Depo-testosterone</i> ; (roids, juice)	injected, swallowed, applied to skin	<i>no intoxication effects</i> /(hypertension, blood clotting, cholesterol changes, liver cysts and cancer, kidney cancer, aggression, acne; in adolescents - premature growth stoppage; in males - prostate cancer, reduced sperm production, shrunken testes, breast enlargement; in females - menstrual irregularity, development of beard and other masculine characteristics)
Dextromethorphan (DXM)	<i>Found in some cough and cold medications</i> ; (Robo, Robotripping, Triple C)	swallowed	<i>Dissociative effects, distorted visual perceptions to complete dissociative effects</i> /(for effects at higher doses, see 'dissociative anesthetics')
Inhalants	<i>Solvents (paint thinners, gasoline, glues), gases (butane, propane, aerosol propellants, nitrous oxide), nitrites (isoamyl, isobutyl, cyclohexyl); (laughing gas, poppers, snappers, whippets)</i>	inhaled through nose or mouth	<i>stimulation, loss of inhibition; headache; nausea or vomiting; slurred speech, loss of motor coordination; wheezing</i> /(unconsciousness, cramps, weight loss, muscle weakness, depression, memory impairment, damage to cardiovascular and nervous systems, sudden death)

Note: This table does not comprise a complete listing of drugs. It is intended to provide basic information on some of the more commonly used substances.

Sources: <http://www.nida.nih.gov/DrugPages/DrugsofAbuse.html>; [www.drugstraining.co.uk](http://www.drugstraining.co.uk)